

RECEIVED

JUN 2 1 2017

OFFICE OF THE REGIONAL ADMINISTRATOR

phone: (617) 422-0880
fax: (617) 292-8057
www.nelconline.org
nelc@nelconline.org
294 Washington St., Ste. 500
Boston, MA 02108

June 13, 2017

BY CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Deborah Szaro, Acting Administrator U.S. EPA Region 1 Headquarters 5 Post Office Square, Suite 100 Boston, MA 02109-3912

Dear Administrator Szaro:

Please find enclosed a copy of a complaint filed by Toxics Action Center, Inc., Environment America, Inc. d/b/a Environment Massachusetts, and ninety-nine individual plaintiffs against Casella Waste Systems, Inc., Southbridge Recycling & Disposal Park, Inc., and the Town of Southbridge under Section 505 of the Clean Water Act, 33 U.S.C. § 1365 and Section 6972(a)(1)(B) of the Resource Conservation and Recovery Act, 42 U.S.C. § 6972(a)(1)(B), as well Massachusetts statutory and common law. The complaint was filed in the United States District Court for the District of Massachusetts on June 9, 2017. The matter has been assigned civil action number 4:17-cv-40089.

Sincerely,

Kevin Budris

National Environmental Law Center 294 Washington St., Suite 500

Boston, Massachusetts 02108

(617) 747-4304

Attorney for Toxics Action Center, Inc. and Environment America, Inc. d/b/a
Environment Massachusetts

Enclosures

West Coast Office: Seattle, WA

The state

Action to the second second

Personal Para - Audit grant to State the State of the Sta

Evruil Tourism mysmill and

i hannos triginia trad

Parameter of the state of the s

Compared the sound of the sound

the term of the section

age of the contract of the

27.046 1905

UNITED STATES DISTRICT COURT FOR THE DISTRICT OF MASSACHUSETTS

RECEIVED

JUN 2 1 2017

OPPICE OF THE REGIONAL ADMINISTRATOR

TOXICS ACTION CENTER, INC., and ENVIRONMENT AMERICA, INC. d/b/a ENVIRONMENT MASSACHUSETTS,

and

MARTHA BERGSTROM and KENNETH BERGSTROM; ELIZABETH BOURASSA and GREG BOURASSA, individually and on behalf of their minor child C.B.; CHRISTIAN BOUSQUET, individually and on behalf of his minor children E.B. and C.B.; BRIAN BREEN and DIANE BREEN, individually and on behalf of their minor children Ky.B., Ke.B., and Ka.B; JAYME BURDETT and) CLARE BURDETT, individually and on behalf of their minor children A.B. and M.B., CELESTE CARLSON and DAVID CARLSON; CHRISTOPHER CARPENTER and MELISSA CARPENTER; STEPHEN COLEMAN and LYNN COLEMAN, individually and on behalf of their minor children L.C. and I.C.; LISA COURCHAINE and DEREK COURCHAINE, individually and on behalf of their minor child A.C.; ERNEST COURVILLE and THERESA COURVILLE: TODD CUMMING and ELIZABETH CUMMING, individually and on behalf of their minor children C.C. and A.C.; PAUL DAOUST and DEBRA DAOUST, individually and on behalf of their minor child B.D.; WILFRID GALLIEN and WENDY GALLIEN, individually and on behalf of their minor children J.G. and T.G; SARAH GERVAIS; ROBERT JAY HOGAN and BARBARA HOGAN: KEVIN JADIN and MELISSA JADIN; JOHN JORDAN and SHARON JORDAN, individually and on behalf of their minor child C.J.; KATHLEEN JOY and KENNETH JOY; DIRK LODDER and LAURA LODDER; JOHN MAHAN and SARAH NEWTON, individually and on behalf of their minor children S.M. and M.M.; RAMONA MANCINI and GEORGE MANCINI; HEATHER MARIACHER; DONNA MARSHALL and MICHAEL MARSHALL; STEPHEN METRAS and JOAN

METRAS; JENNIFER MOBERG and SCOTT

Civil Action No.:

COMPLAINT and JURY DEMAND

MOBERG, individually and on behalf of their minor children Ju.M. and Jo.M.; ALICE MURPHY and KELLY MURPHY; MICHAEL O'NEILL and SHALYN O'NEILL, individually and on behalf of their minor children B.O. and J.O.; JENNIFER RAPOZA and JOHN RAPOZA; KENNETH RAUKTIS and ELLEN RAUKTIS; DARRICK ROE and SARA ROE, individually and on behalf of their minor child D.R.; CHRISTOPHER SHAW and LAUREN SHAW, individually and on behalf of their minor children A.S., R.S., and B.S.; EDWARD SKOWRON and JOANNE SKOWRON; DANIEL STERN and CATHERINE STERN, individually and on behalf of their minor children N.S. and M.S.; KEVIN WELDON and CYNTHIA WELDON; SHERRI WESTBURY and JOSEPH WESTBURY, individually and on behalf of their minor children A.W. and R.W.; and LAURIE ZANCA, Plaintiffs, V. CASELLA WASTE SYSTEMS, INC., SOUTHBRIDGE RECYCLING & DISPOSAL PARK, INC., and THE TOWN OF SOUTHBRIDGE, Defendants.

I. INTRODUCTION

1. The Southbridge Recycling and Disposal Park (the "Landfill") has for many years been releasing toxic pollutants to groundwater in Southbridge, Charlton, and Sturbridge, Massachusetts, resulting in the widespread and increasing pollution of nearby wetlands, waterways, drinking water aquifers, and residential drinking wells.

- At present, more than eighty-five residential drinking wells in Sturbridge and Charlton have been contaminated by the pollutants released by the Landfill, and dozens more are at risk of contamination.
- 3. The Landfill is also polluting surrounding communities with odor and noise.

 Noxious fumes from the Landfill's decomposing waste befoul the air at neighboring properties, while an incessant din of heavy vehicles crashing, banging, and beeping deprives the Landfill's neighbors of the quiet enjoyment of their homes.
- 4. Defendants in this action are Casella Waste Systems, Inc. ("Casella") and its wholly owned subsidiary Southbridge Recycling & Disposal Park, Inc. ("SRDP"), who together operate the Landfill; and the Town of Southbridge ("Town"), which owns and formerly operated the Landfill.
 - 5. This action is brought by two different sets of Plaintiffs:
 - a. Two non-profit environmental organizations, Toxics Action Center,
 Inc. ("Toxics Action") and Environment America, Inc. d/b/a
 Environment Massachusetts ("Environment Massachusetts")

 (collectively, the "Group Plaintiffs"); and
 - b. Ninety-nine individuals who reside or recently resided near the Landfill in Charlton (the "Individual Plaintiffs").
- 6. Plaintiffs bring this action under the citizen suit provisions of two federal environmental statutes, the Resource Conservation and Recovery Act, 42 U.S.C. § 6901 et seq. ("RCRA"), and the Federal Water Pollution Control Act, 33 U.S.C. § 1251 et seq. ("Clean Water Act," or "CWA"). The RCRA claim, which is brought both by the Group Plaintiffs and the Individual Plaintiffs, alleges that the Landfill's groundwater

contamination poses an imminent and substantial endangerment to human health and the environment within the meaning of Section 7002(a)(1)(B) of RCRA, 42 U.S.C. § 6972(a)(1)(B). The CWA claim, brought solely by the Group Plaintiffs, alleges that the Landfill is discharging pollutants to waters of the United States through hydrologically connected groundwater without National Pollutant Discharge Elimination System Permit authorization, in violation of Sections 301 and 402 of the CWA, 33 U.S.C. §§ 1311 and 1342.

- 7. Besides their RCRA claim, the Individual Plaintiffs bring several supplemental state law claims against Defendants. They bring a statutory claim under the Massachusetts Oil and Hazardous Material Release Prevention and Response Act, M.G.L. c. 21E ("c. 21E"), in addition to common law claims of nuisance, trespass, and unjust enrichment. The common law claims are based both on Defendants' groundwater pollution and on Defendants' odor and noise pollution of the Individual Plaintiffs' properties.
- 8. As relief in this action, Plaintiffs seek, inter alia, an order enjoining
 Defendants' further pollution of groundwater and surface waters at and around the
 Landfill; an order mandating that Defendants fully investigate the extent of their
 groundwater and surface water contamination; an order that Defendants fully remediate
 the groundwater and surface waters that they have contaminated; an order mandating that
 Defendants prospectively monitor all residential wells potentially threatened with
 contamination by the Landfill's pollutants; an order mandating that Defendants fund the
 installation of a municipal water line for all neighborhoods with homes whose wells are
 now contaminated, or are threatened with contamination, by the Landfill's pollutants; an

order enjoining any further emission of nuisance odors or noise from the Landfill; an award of money damages to compensate the Individual Plaintiffs for the damage that Defendants' pollution has done to them and their properties; a disgorgement of the financial benefits that have accrued to Defendants in consequence of their failure to invest in timely and appropriate pollution control measures; the creation of a medical monitoring fund to enable the Individual Plaintiffs to monitor for and detect diseases potentially caused by the toxic chemicals and metals to which they have been or may have been exposed; an assessment of civil penalties against Defendants under the Clean Water Act; and an award of Plaintiffs' litigation costs, including attorney and expert witness fees.

9. For the Court's orientation, Plaintiffs include below a Table of Contents for this Complaint:

| I. Introduction |
|--|
| II. Jurisdiction and Venue9 |
| III. Parties |
| A. Group Plaintiffs |
| B. Individual Plaintiffs |
| C. Defendants 20 |
| IV. Factual Background20 |
| A. Landfill Management and Operation20 |
| B. Defendants' Analyses of Groundwater Flow and Quality at the |
| Landfill23 |
| C. The Landfill's Construction and Expansion |

| D. | Surface Waters Surrounding the Landfill | 26 |
|------|---|-----|
| E. (| Groundwater Flow at the Landfill | .28 |
| | i. Overburden Groundwater Flow | 28 |
| | ii. Bedrock Groundwater Flow | 29 |
| F. 7 | The Landfill's Contamination of Groundwater | .30 |
| | i. Shallow Groundwater Monitoring | 32 |
| | ii. Deep Bedrock Groundwater Monitoring | 51 |
| | iii. Defendants' Groundwater Contamination Analyses | 54 |
| G. | Adverse Effects of the Landfill's Pollutants | 56 |
| | i. Iron | 56 |
| | ii. Lead | 56 |
| | iii. Arsenic | 57 |
| | iv. Manganese | 57 |
| | v. Copper | 57 |
| | vi. Barium | 58 |
| | vii. 1,4-Dioxane | 58 |
| | viii. Sulfate | 58 |
| | ix. Total Dissolved Solids | 59 |
| | x. Trichloroethylene | 59 |
| | xi. Chlorobenzene | 59 |
| | xii. 1,1-Dichloroethane | 59 |
| | xiii. 1,1-Dichloroethene | 60 |
| | xiv. Cis-1.2-Dichloroethene | .60 |

| xv. Toluene |
|--|
| xvi. Chloroform60 |
| xvii. Benzene61 |
| xviii. Naphthalene |
| H. DEP's Involvement With the Landfill |
| i. 2012 Trend Analysis Report |
| ii. 2016 Consent Order63 |
| iii. DEP's Chapter 21E Response |
| iv. 2017 Consent Order67 |
| I. The Landfill's Odor and Noise Pollution |
| V. Claims |
| Count 1: Violations of the Clean Water Act70 |
| i. Citizen Enforcement Suits Under the Clean Water Act70 |
| ii. NPDES Multi-Sector General Permit71 |
| iii. Reported Surface Water Monitoring Results73 |
| iv. Direct Hydrological Connection Between the Landfill and |
| Wetlands81 |
| v. Clean Water Act Violations |
| a. The Landfill is a Point Source |
| b. The Wetlands and McKinstry Brook are Waters of the United |
| States |
| c. The Landfill is Not Authorized to Discharge Contaminated |
| Groundwater85 |

| d. The Landfill is Discharging Pollutants to the Wetlands and to |
|--|
| McKinstry Brook85 |
| 1. Discharges to Wetland A86 |
| 2. Discharges to Wetland Z90 |
| 3. Discharges to Wetland I92 |
| vi. The Group Plaintiffs and Their Members are Harmed by the |
| Clean Water Act Violations |
| Count 2: RCRA Imminent and Substantial Endangerment96 |
| i. RCRA Imminent and Substantial Endangerment Actions96 |
| ii. Charlton Aquifer Contamination |
| a. Charlton Residential Well Monitoring98 |
| b. The Charlton Aquifer Contamination is Attributable to the |
| Landfill |
| c. The Release of Pollutants from the Landfill to the Charlton |
| Aquifers Has Created, and Will Continue to Create, an |
| Imminent and Substantial Endangerment |
| iii. Sturbridge Aquifer Contamination |
| a. Sturbridge Residential Well Monitoring144 |
| b. The Sturbridge Aquifer Contamination is Attributable to the |
| Landfill |
| c. The Release of Pollutants from the Landfill to the Sturbridge |
| Aquifers Has Created, and Will Continue to Create, and |
| Imminent and Substantial Endangerment 160 |

| iv. Defendants are Contributing to the Imminent and Substantial |
|---|
| Endangerment |
| v. The Individual Plaintiffs and the Group Plaintiffs are Harmed by |
| the Landfill's Imminent and Substantial Endangerment163 |
| Count 3: Property Damage Under M.G.L. c. 21E, §5165 |
| Count 4: Continuing Private Nuisance |
| Count 5: Continuing Trespass |
| Count 6: Unjust Enrichment |
| 7I. Jury Demand |
| /II. Relief Requested |
| |

II. JURISDICTION AND VENUE

- 10. This Court has subject matter jurisdiction over this action pursuant to 33 U.S.C. § 1365(a)(1) (the CWA citizen suit provision), 42 U.S.C. § 6972(a)(1)(B) (RCRA's citizen suit provision), 28 U.S.C. § 1331 (federal question jurisdiction), and 28 U.S.C. § 1367(a) (supplemental jurisdiction).
- 11. Venue lies in this District under 33 U.S.C. § 1365(c)(1) and 42 U.S.C. § 6972(a), because the Landfill is located within this District.
- 12. This action is properly filed in the Central Division of the District of Massachusetts because the Landfill is located within the Central Division.
- 13. Pursuant to Section 505(b) of the CWA, 33 U.S.C. § 1365(b), and Section 7002(b)(2)(A) of RCRA, 42 U.S.C. § 6972(b)(2)(A), the Group Plaintiffs gave notice of the CWA violations and RCRA claim alleged herein more than 90 days prior to the commencement of this lawsuit by mailing a certified letter ("Group Notice Letter") to: (a)

Edwin Johnson, president of Casella; (b) John Casella, secretary of Casella and president of SRDP; (c) Ronald San Angelo, Town Manager of the Town of Southbridge; (d) C T Corporation System, registered agent for Casella and SRDP; (e) the Acting Administrator of the United States Environmental Protection Agency ("EPA"); (f) the Acting Regional Administrator of EPA Region 1; and (g) the Commissioner of the Massachusetts Department of Environmental Protection ("DEP"). See also 40 CFR §§ 135.2, 254.2 (EPA regulations governing Notices of Intent to Sue under the CWA and RCRA).

- 14. A copy of the Group Notice Letter is attached as Exhibit 1 to this Complaint and is incorporated by reference herein.
- 15. Each of the parties listed above received the Group Notice Letter. Copies of the return receipts are attached as Exhibit 2 to this Complaint.
- 16. The Group Notice Letter satisfies the pre-suit notice requirements of Section 505(b) of the CWA, 33 U.S.C. § 1365(b), which requires 60 days' notice, and Section 7002(b)(2)(A) of RCRA, 42 U.S.C. § 6972(b)(2)(A), which requires 90 days' notice.
- 17. Pursuant to Section 7002(b)(2)(A) of RCRA, 42 U.S.C. § 6972(b)(2)(A), the Individual Plaintiffs gave notice of the RCRA claim alleged herein more than 90 days prior to the commencement of this lawsuit by mailing a certified letter ("Individual Plaintiff Notice Letter to Casella/SRDP") to: (a) John Casella, chief executive officer of Casella and president of SRDP; (b) Tracy Markham, landfill site manager for Casella and SRDP; (c) C T Corporation, registered agent for Casella and SRDP; (d) the Administrator of the EPA; (e) the Regional Administrator of EPA Region 1; and (f) the Commissioner of DEP.

- 18. A copy of the Individual Plaintiff Notice Letter to Casella/SRDP is attached as Exhibit 3 to this Complaint and is incorporated by reference herein.
- 19. Each of the parties listed above received the Individual Plaintiff Notice

 Letter to Casella/SRDP. Copies of the return receipts are attached as Exhibit 4 to this

 Complaint.
- 20. The Individual Plaintiff Notice Letter to Casella/SRDP satisfies the pre-suit notice requirements of Section 7002(b)(2)(A) of RCRA, 42 U.S.C. § 6972(b)(2)(A).
- 21. Pursuant to Section 7002(b)(2)(A) of RCRA, 42 U.S.C. § 6972(b)(2)(A), and the Massachusetts Tort Claims Act, M.G.L. c. 258, § 4, the Individual Plaintiffs gave notice of the RCRA claim and Massachusetts tort claims alleged herein more than six months prior to the commencement of this lawsuit by mailing a certified letter ("Individual Plaintiff Notice Letter to Town") to: (a) Ronald San Angelo, the Town Manager of Southbridge; (b) the Administrator of the EPA; (c) the Regional Administrator of EPA Region 1; and (d) the Commissioner of DEP.
- 22. A copy of the Individual Plaintiff Notice Letter to the Town is attached as Exhibit 5 to this Complaint and is incorporated by reference herein.
- 23. Each of the parties listed above received the Individual Plaintiff Notice

 Letter to the Town. Copies of the return receipts are attached as Exhibit 6 to this

 Complaint.
- 24. The Individual Plaintiff Notice Letter to the Town satisfies the pre-suit notice requirements of Section 7002(b)(2)(A) of RCRA, 42 U.S.C. § 6972(b)(2)(A), and the Massachusetts Tort Claims Act, M.G.L. c. 258, § 4.

- 25. Neither EPA nor the Commonwealth of Massachusetts has commenced or is diligently prosecuting a civil or criminal action against Defendants in a court of the United States or a state to require compliance with the statutes, laws, rules, regulations, permits, standards, and limitations at issue in this case.
- 26. Neither EPA nor the Commonwealth of Massachusetts has commenced or is diligently prosecuting, a civil action or administrative penalty action regarding any of the CWA violations alleged herein. Neither EPA nor the Commonwealth of Massachusetts has commenced, and neither is diligently prosecuting, any administrative enforcement action against Defendants to require compliance with the CWA provisions at issue in this case.
- 27. Neither EPA nor the Commonwealth of Massachusetts has commenced or is neither is diligently prosecuting, an action against Defendants under 42 U.S.C. § 6973 (RCRA's "imminent hazard" provision) or 42 U.S.C. § 9606 (the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA") "abatement actions" provision).
- 28. Neither EPA nor the Commonwealth of Massachusetts, in order to restrain or abate the imminent and substantial endangerment posed by the Landfill's contamination of drinking water aquifers in Charlton and Sturbridge, is engaging in a removal action under Section 104 of CERCLA, 42 U.S.C. § 9604; has incurred costs to initiate a Remedial Investigation and Feasibility Study under Section 104 of CERCLA and is diligently proceeding with a remedial action under CERCLA; or has obtained a court order or issued an administrative order under Section 106 of CERCLA, 42 U.S.C. § 9606, or Section 6973 of RCRA, 42 U.S.C. § 6973.

III. PARTIES

A. Group Plaintiffs

- 29. Plaintiff Toxics Action is a non-profit corporation duly organized under the laws of Massachusetts. Toxics Action has approximately 1,460 members. Toxics Action works with communities across New England, including Massachusetts, to clean up pollution at the local level.
- 30. Toxics Action has members who live, own homes, and recreate near the wetlands and the stream (McKinstry Brook) that are polluted by the Landfill. These members consider this aquatic environment to be an important part of where they live and do not want to live or recreate near waterways that have been polluted by the Landfill.
- 31. Toxics Action has members who live near the Landfill and whose homes are supplied by well water. Among these members are individuals whose water supply has been contaminated by one or more pollutants released by the Landfill to groundwater, or whose homes are located near those whose water supply has been contaminated by one or more of these pollutants.
- 32. Toxics Action has members who are adversely affected by the Landfill's illegal discharges of pollutants to wetlands and McKinstry Book and members who are adversely affected by the Landfill's contamination of drinking water aquifers in Charlton and Sturbridge.
- 33. Plaintiff Environment America, Inc., is a non-profit corporation duly organized under the laws of Colorado. Environment America, Inc. is a citizen-funded environmental advocacy organization that engages in education, research, lobbying, litigation, and citizen organizing to promote clean air, clean water, and the preservation

of natural resources. Environment America, Inc., operates in Massachusetts as Environment Massachusetts, which is a citizen-based advocacy project focused on environmental concerns in Massachusetts.

- 34. Pursuant to M.G.L. c. 100, § 5, Environment America, Inc. has filed a Business Certificate with the City of Boston indicating that it does business under the title of Environment Massachusetts.
- 35. Environment Massachusetts has approximately 15,000 members in Massachusetts.
- 36. Environment Massachusetts has members who live, own homes, or recreate near McKinstry Brook and its wetlands. These members consider this aquatic environment to be an important part of where they live and do not want to live or recreate near waterways that have been polluted by the Landfill.
- 37. Environment Massachusetts has members who live near the Landfill and whose homes are supplied by well water. Among these members are individuals whose water supply has been contaminated by one or more pollutants released by the Landfill to groundwater, or whose homes are located near those whose water supply has been contaminated by one or more of these pollutants.
- 38. Environment Massachusetts has members who are adversely affected by the Landfill's illegal discharges of pollutants to wetlands and McKinstry Brook and members who are adversely affected by the Landfill's contamination of drinking water aquifers in Charlton and Sturbridge.

B. Individual Plaintiffs

- 39. As set forth below, the Individual Plaintiffs either reside or recently have resided at thirty-six homes in Charlton near the Landfill (the "Individual Plaintiff Households"). These homes are situated on four roads located around the northern end of the Landfill: H Foote Road, Eleanor Lane, Berry Corner Road, and No. Ten Schoolhouse Road.
- 40. The Individual Plaintiffs have each been damaged, and continue to be damaged, by a combination of Defendants' groundwater, odor, and noise pollution.
- 41. Each of the Individual Plaintiff Households has a well from which it draws its water supply. The Individual Plaintiffs are adversely affected by the Landfill's discharge of pollutants to groundwater because (a) their well has been contaminated by these pollutants, or (b) their well is threatened with such contamination, given its proximity to the Landfill and the contaminated wells. The health of each of the Individual Plaintiffs is thus endangered.
- 42. Aside from the endangerment to their health, the Individual Plaintiffs are adversely affected by the Landfill's discharge of pollutants to groundwater because their environment is being degraded. Regardless of any measures taken to filter or replace their water supply, the Individual Plaintiffs are aggrieved to know that the earth beneath them is being poisoned by the Landfill's pollution.
- 43. Plaintiffs Martha and Kenneth Bergstrom reside at 75 H Foote Road in Charlton. The Bergstroms acquired their property at 75 H Foote Road in 1988.

- 44. Plaintiffs Elizabeth and Greg Bourassa and their minor child C.B. reside at 10 Eleanor Lane in Charlton. The Bourassas acquired their property at 10 Eleanor Lane in 2007.
- 45. Plaintiffs Christian Bousquet and his minor children E.B. and C.B. reside at 19 Eleanor Lane in Charlton. Mr. Bousquet acquired his property at 19 Eleanor Lane in 2014.
- 46. Plaintiffs Brian and Diane Breen and their minor children Ky.B., Ke.B., and Ka.B. reside at 82 H Foote Road in Charlton. The Breens acquired their property at 82 H Foote Road in 2005.
- 47. Plaintiffs Jayme and Clare Burdett and their minor children A.B. and M.B. reside at 34 H Foote Road in Charlton. The Burdetts acquired their property at 34 H Foote Road in 2005.
- 48. Plaintiffs Celeste and David Carlson reside at 77 H Foote Road in Charlton.

 The Carlsons acquired their property at 77 H Foote Road in 1998.
- 49. Plaintiffs Christopher and Melissa Carpenter reside at 66 No. Ten Schoolhouse Road in Charlton. The Carpenters acquired their property at 66 No. Ten Schoolhouse Road in 1990.
- 50. Plaintiffs Stephen Coleman and Lynn Coleman and their minor children L.C. and I.C. reside at 150 Berry Corner Road in Charlton. The Colemans acquired their property at 150 Berry Corner Road in 1996.
- 51. Plaintiffs Lisa and Derek Courchaine and their minor child A.C. reside at 13 Eleanor Lane in Charlton. The Courchaines acquired their property at 13 Eleanor Lane in 2007.

- 52. Plaintiffs Ernest and Theresa Courville reside at 65 No. Ten Schoolhouse Road in Charlton. The Courvilles acquired their property at 65 No. Ten Schoolhouse Road in 1997.
- 53. Plaintiffs Todd and Elizabeth Cumming and their minor children C.C. and A.C. reside at 21 Eleanor Lane in Charlton. The Cummings acquired their property at 21 Eleanor Lane in 2007.
- 54. Plaintiffs Paul and Debra Daoust and their minor child B.D. reside at 49 H Foote Road in Charlton. Mr. Daoust acquired the property at 49 H Foote Road in 2007.
- 55. Plaintiffs Wilfrid and Wendy Gallien and their minor children J.G. and T.G. reside at 74 H Foote Road in Charlton. The Galliens acquired their property at 74 H Foote Road in 2007.
- 56. Plaintiff Sarah Gervais resides at 161 Berry Corner Road in Charlton. She acquired her property at 161 Berry Corner Road in 1984.
- 57. Plaintiffs Robert Hogan and Barbara Hogan reside at 95 H Foote Road in Charlton. The Hogans acquired their property at 95 H Foote Road in 2000.
- 58. Plaintiffs Kevin Jadin and Melissa Jadin recently moved to 82 Pumpkin Lane in Charlton. From 1994 to 2016, they resided at their home at 185 Berry Corner Road in Charlton.
- 59. Plaintiffs John and Sharon Jordan and their minor child C.J. reside at 68 H Foote Road in Charlton. The Jordans acquired their property at 68 H Foote Road in 2000.
- 60. Plaintiffs Kathleen Joy and Kenneth Joy reside at 135 Berry Corner Road in Charlton. The Joys acquired their property at 135 Berry Corner Road in 1981.

- 61. Plaintiffs Dirk Lodder and Laura Lodder reside at 148 Berry Corner Road in Charlton. The Lodders acquired their property at 148 Berry Corner Road in 1989.
- 62. Plaintiffs John Mahan, Sarah Newton and their minor children S.M. and M.M. reside at 54 H Foote Road in Charlton. Mr. Mahan acquired the property at 54 H Foote Road in 2005.
- 63. Plaintiffs Ramona Mancini and George Mancini reside at 11 Eleanor Lane in Charlton. The Mancinis acquired their property at 11 Eleanor Lane in 2007.
- 64. Plaintiff Heather Mariacher resides at 149 Berry Corner Road in Charlton.

 She acquired her property at 149 Berry Corner Road in 2014.
- 65. Plaintiffs Donna Marshall and Michael Marshall reside at 59 H Foote Road in Charlton. The Marshalls acquired their property at 59 H Foote Road in 1998.
- 66. Plaintiffs Stephen Metras and Joan Metras reside at 73 H Foote Road in Charlton. The Metrases acquired their property at 73 H Foote Road in 1991.
- 67. Plaintiffs Jennifer and Scott Moberg and their minor children Ju.M. and Jo.M. reside at 94 H Foote Road in Charlton. The Mobergs acquired their property at 94 H Foote Road in 2002.
- 68. Plaintiffs Alice Murphy and Kelly Murphy recently moved to 14 Thayer Pond, Unit 11, North Oxford, MA. From 2007 to early 2017, they resided at their home at 14 Eleanor Lane in Charlton.
- 69. Plaintiffs Michael and Shalyn O'Neill and their minor children B.O. and J.O. reside at 18 Eleanor Lane in Charlton. The O'Neills acquired their property at 18 Eleanor Lane in 2007.

- 70. Plaintiffs Jennifer and John Rapoza reside at 17 Eleanor Lane in Charlton.

 The Rapozas acquired their property at 17 Eleanor Lane in 2007.
- 71. Plaintiffs Kenneth Rauktis and Ellen Rauktis reside at 98 H Foote Road in Charlton. The Rauktises acquired their property at 98 H Foote Road in 2002.
- 72. Plaintiffs Darrick and Sara Roe and their minor child D.R. reside at 70 H Foote Road in Charlton. The Roes acquired their property at 70 H Foote Road in 2013.
- 73. Plaintiffs Christopher and Lauren Shaw and their minor children A.S., R.S., and B.S. reside at 58 H Foote Road in Charlton. The Shaws acquired their property at 58 H Foote Road in 2004.
- 74. Plaintiffs Edward Skowron and Joanne Skowron reside at 117 Berry Corner Road in Charlton. Mr. Skowron acquired the property at 117 Berry Corner Road in 1977.
- 75. Plaintiffs Daniel and Catherine Stern and their minor children N.S. and M.S. reside at 5 Eleanor Lane in Charlton. The Sterns acquired their property at 5 Eleanor Lane in 2011.
- 76. Plaintiffs Kevin Weldon and Cynthia Weldon reside at 66 H Foote Road in Charlton. The Weldons acquired their property at 66 H Foote Road in 2000.
- 77. Plaintiffs Sherri and Joseph Westbury and their minor children A.W. and R.W. reside at 181 Berry Corner Road in Charlton. Mr. Westbury acquired the property at 181 Berry Corner Road in 2002.
- 78. Plaintiff Laurie Zanca resides at 86 H Foote Road in Charlton. She acquired her property at 86 H Foote Road in 2004.

C. Defendants

- 79. Defendant Casella is a publicly traded corporation organized under the laws of Delaware and headquartered in Rutland, Vermont. It is registered to do business in the Commonwealth of Massachusetts. Casella is an operator of, and a transporter of waste to, the Landfill.
- 80. Defendant SRDP, organized under the laws of Massachusetts, is a whollyowned subsidiary of Casella headquartered in Rutland, Vermont. SRDP is an operator of the Landfill.
- 81. Defendant Town of Southbridge, a Massachusetts municipality in Worcester County, is the owner and former operator of the Landfill.

IV. FACTUAL BACKGROUND

A. Landfill Management and Operation

- 82. The Landfill was opened in approximately 1981. Until 1996, the Town both owned and operated the Landfill.
- 83. On December 9, 1996, the Town entered into an agreement with Wood Recycling, Inc. ("WRI") under which WRI would operate the Landfill.
- 84. In October 2003 Casella purchased WRI. Casella subsequently changed the name of WRI to Southbridge Recycling & Disposal Park, Inc. ("SRDP").
- 85. On May 29, 2007, SRDP and the Town entered into an Extension of Agreement for the Operation of the Barefoot Road Sanitary Landfill, and Refuse and Recyclables Collection, Southbridge Massachusetts ("Extension Agreement").

- 86. The Extension Agreement granted SRDP, therein referred to as "SRD," the exclusive right to occupy and use the Landfill and manage and dispose of solid waste at the Landfill.
- 87. Section 3.4(a) of the Extension Agreement provides: "SRD shall assume sole responsibility and control, and bear all costs, including all labor, equipment, and materials and all direct and indirect expenses, for the development, permitting, management and operation of the Landfill Facility for the Term of this Extension Agreement and for the Closure and Post-Closure Activities."
- 88. Section 3.4(b) of the Extension Agreement provides: "SRD shall at its sole cost and expense be responsible for the day-to-day operation of the Landfill Facility, including, without limitation, storm water management system, gas collection system, air quality monitoring devices, weighing waste, testing waste for nature and consistency, preparation of waste for disposal, cell construction, disposal of waste, preparing and applying daily interim and final cover, construction of temporary roads and other temporary access, installation and monitoring of ground water wells, maintenance and operation of a leachate collection system and disposal system."
- 89. Section 3.4(c) of the Extension Agreement provides: "SRD shall at its expense be responsible for providing and maintaining all necessary facilities, including equipment for the receiving and handling of waste to be disposed at the Landfill Facility. Such responsibilities shall include without limitation (i) employing all necessary personnel to operate the Landfill Facility, and (ii) providing all services incidental to the business of operating the Landfill Facility (including security, accounting, legal, fire prevention and pollution control)."

- 90. Section 3.4(g) of the Extension Agreement provides: "SRD will bear all costs, including all direct and indirect expenses, attributed to the operation of the Landfill Facility."
- 91. Casella plays a direct role in managing and funding the Landfill's operations and pollution control activities. Evidence of Casella's direct involvement as an operator of the Landfill includes, but is not limited to, the following:
 - a. On October 31, 2016, "Casella Waste Systems, Inc." sent a letter to Massachusetts Senator Anne M. Gobi stating that "Casella" had "expended over \$2,000,000 in hydrogeological studies to try to determine the source" of well contamination in Charlton; that "Casella ha[d] been providing impacted residents with free bottled water and purification systems" while the contamination was investigated; and that "Casella ha[d] taken the most active role in dealing with the issues associated with [private well] contamination."
 - b. On May 25, 2016, DEP addressed a letter to John Casella in his capacity as president of Casella Waste Systems, Inc. ("May 25, 2016 Interim Deadline Letter") stating: "On October 23, 2015, Casella Waste Systems, Inc., on behalf of Southbridge Recycling & Disposal Park, Inc. . . . notified MassDEP of a two-hour reporting condition for detections of chlorinated volatile organic compounds (CVOCS) and 1,4-dioxane exceeding the Reportable Concentrations (RCGW-1) in three private drinking water wells on H. Foote Road in Charlton, Massachusetts, near the Southbridge Landfill, as required by 310 CMR 40.0311(6)."

c. Groundwater monitoring work at the Landfill—discussed below in Paragraphs 182 - 229—performed by Rhode Island Analytical Laboratories is invoiced to "Casella Waste Services" in Auburn, Massachusetts.

B. Defendants' Analyses of Groundwater Flow and Quality at the Landfill

- 92. To comply with regulatory requirements, Casella, SRDP, and/or WRI have commissioned several analyses of groundwater flow and quality at the Landfill over the years. The following such analyses will be referred to in this Complaint:
 - a. On August 4, 2016, on behalf of SRDP, the consulting firm Tighe & Bond, Inc. ("Tighe & Bond") submitted to DEP a report prepared by the consulting firm Sanborn, Head & Associates ("Sanborn Head") evaluating hydrogeological conditions in the area of the Landfill entitled "Hydrogeology Investigation, Southbridge Sanitary Landfill" and dated January 2016 ("January 2016 Hydrogeology Investigation").
 - b. On April 22, 2016, Sanborn Head submitted to SRDP a "Summary of Preliminary Western-Southwestern Investigation Results" ("April 2016 Investigation"), which summarized Sanborn Head's investigation of groundwater in the vicinity of wetlands to the west of the Landfill.
 - c. On April 30, 2013, Tighe & Bond submitted to DEP a "Third Party Water Quality Evaluation: Arsenic, Chromium & Lead" ("2013 Water Quality Evaluation"), which evaluated groundwater quality data at the Landfill "[o]n behalf of Casella Waste Systems, Inc."

d. The consulting firm Earth Tech, Inc. ("Earth Tech") prepared a February 25, 2004 Qualitative Risk Assessment ("2004 Risk Assessment") for WRI that evaluated the potential risks to public health, safety, and the environment posed by the Landfill.

C. The Landfill's Construction and Expansion

- 93. The Landfill incorporates approximately 51 acres of waste disposal space.
- 94. The Landfill is divided into multiple confined and discrete units, or cells, that have been constructed sequentially over time, beginning in approximately 1981.
- 95. Each Landfill cell is identified according to the Landfill construction and/or expansion phase during which it was built.
- 96. The January 2016 Hydrogeology Investigation includes appended figures depicting Landfill characteristics. Figure 12 is attached as Exhibit 7 to this Complaint. It depicts the development sequence of the Landfill and the individual cells that make up the Landfill.
- 97. There have been seven phases of the Landfill thus far, identified as Phase I through Phase VII.
- 98. Phases I and II, the initial phases of the Landfill, include neither synthetic liners, composite liners, nor leachate collection systems. The cells in these phases were constructed using compacted subgrade.
- 99. Composite liners are typically constructed using two or more layers of synthetic material and are used to line landfill cells.
- 100. Leachate collection systems direct leachate—liquid that has passed through or emerged from solid waste and contains soluble, suspended, or miscible materials

removed from such waste—to a network of channels, pipes, and/or pumps that transport the leachate to holding tanks or ponds.

- 101. Phases IIIA and IIIB include neither synthetic liners nor composite liners.

 The cells in these phases were constructed using compacted subgrade.
 - 102. Phases IIIA and IIIB include leachate collection systems.
- 103. Phases IIIC, IV, V, and VI were constructed using composite liners and leachate collection systems.
- 104. Phase VII currently consists of nine discrete cells: 7.1A, 7.1B, 7.2A, 7.2B, 7.1B', 7.2B', 7.3 Stage 1, 7.3 Stage 2, and 7.4 Stage 1. These cells are located to the north of Phases I-VI.
- 105. The Phase VII cells were constructed using composite liners and leachate collection systems.
- 106. Phase 7.4 Stage 1 is the currently active portion of the Landfill. It is permitted to accept an average of 1,500 tons per day of municipal solid waste and construction and demolition residual waste over six operating days per week. The Landfill is also permitted to accept up to 2,000 tons of waste on any one day during a calendar week, and to accept a maximum of 405,600 tons of combined waste per calendar year.
- 107. On January 22, 2016, SRDP submitted to DEP an Application for a

 Determination of Site Suitability to permit the Landfill to expand onto parcels of land in

 Charlton and Southbridge ("Expansion Application").
- 108. On February 15, 2017, DEP issued a Negative Report on Suitability, denying SRDP's application for a determination of site suitability.

- 109. In Section II.B.9 of the Negative Report on Suitability, DEP found that the Expansion Application contained insufficient information from which DEP could determine "the nature and extent to which the combined impacts of the existing Landfill and the Site adversely impact public health, safety, or the environment."
- 110. In Section II.B.11 of the Negative Report on Suitability, DEP found that the Expansion Application did not contain sufficient information for DEP to determine "whether the proposed impacts of the proposed expansion pose a threat to public health, safety or the environment, taking into consideration the impacts of existing sources of pollution or contamination as defined by the Department."

D. Surface Waters Surrounding the Landfill

- 111. A network of wetlands is located immediately adjacent to the Landfill on its southwestern, western, northwestern, and eastern sides.
- 112. Sanborn Head attached to the April 2016 Investigation a Site Plan that depicted hydrogeological features near the Landfill. That Site Plan is attached as Exhibit 8 to this Complaint and is incorporated by reference herein.
- 113. In the Site Plan, Sanborn Head labels the wetland to the west of the Landfill "Wetland A"; the wetland to the northwest of the Landfill "Wetland Z"; and the wetland to the east of the Landfill "Wetland I." This Complaint adopts this naming convention.
- 114. Wetlands A, Z, and I (collectively, "Wetlands") are classified as Bordering Vegetated Wetlands ("BVW") pursuant to Massachusetts regulations.
- 115. BVW are defined as "freshwater wetlands which border on creeks, rivers, streams, ponds and lakes." They are "areas where the soils are saturated and/or inundated

such that they support a predominance of wetland indicator plants." 310 CMR 10.55(2)(a).

- 116. BVW are "areas where ground water discharges to the surface area and where, under some circumstances, surface water discharges to ground water." 310 CMR 10.55(1).
- 117. BVW "slow down and reduce the passage of flood waters during periods of peak flows by providing temporary flood water storage and by facilitating water removal through evaporation and transpiration. . . . During dry periods the water retained in [BVW] is essential to the maintenance of base flow levels in rivers and streams, which in turn is important to the protection of water quality and water supplies." 310 CMR 10.55(1).
- 118. Massachusetts regulations state that BVW "are likely to be significant to public or private water supply, to ground water supply, to flood control, to storm damage prevention, to prevention of pollution, to the protection of fisheries and to wildlife habitat." 310 CMR 10.55(1).
- 119. The Wetlands drain north through an unnamed tributary that empties into McKinstry Brook approximately 1,000 feet north/northwest of the northern edge of Phase 7.4 of the Landfill.
- 120. The Wetlands are hydrologically connected to McKinstry Brook through the aforementioned unnamed tributary.
- 121. McKinstry Brook flows in a southwest direction to the west of the Landfill, and discharges to the Quinebaug River approximately two miles south of the Landfill in Southbridge.

- 122. The McKinstry Brook Wildlife Management Area, a 347-acre forested area owned by the Commonwealth of Massachusetts, is located along McKinstry Brook, both upstream and downstream of where water from Wetlands A, Z, and I empty into McKinstry Brook.
- 123. The McKinstry Brook Wildlife Management Area includes a 1.4-mile network of walking trails, and is accessible from parking lots on McGilpin Road in Sturbridge and Pleasant Street in Southbridge.

E. Groundwater Flow at the Landfill

124. Pollutants released from the Landfill cells enter groundwater that flows through overburden and bedrock under and around the Landfill.

i. Overburden Groundwater Flow

- 125. Overburden is soil, sand, silt, clay, or gravel that overlies bedrock.
- 126. Overburden under and around the Landfill is composed predominantly of glacial till, in the form of sand and silt in upper layers and silt and clay in lower layers.
- 127. Wetland A, located west of the Landfill, is separated from Landfill Phases I and 7.1A by a narrow strip of overburden that ranges from approximately fifty to two hundred feet wide. See Exhibits 7, 8.
- 128. Wetland Z, located northwest of the Landfill, is separated from Landfill Phase 7.3 Stage I West by a narrow strip of overburden that is approximately seventy-five feet wide at its narrowest point. See Exhibits 7, 8.
- 129. Wetland I, located east of the Landfill, is separated from Landfill Phases V, VI, 7.2B, 7.2B', 7.3 Stage II East, and 7.4 Stage I by a narrow strip of overburden that ranges from approximately seventy-five to two hundred feet wide. See Exhibits 7, 8.

- 130. Groundwater in overburden at the Landfill flows in two predominant directions: west/northwest toward Wetlands A and Z, and east toward Wetland I.
- 131. Pollutants released by the Landfill to groundwater are transported to Wetlands A and Z through the west/northwestern flow pattern and to Wetland I through the eastern flow pattern.
- 132. In its 2013 Water Quality Evaluation, Tighe & Bond concluded that "groundwater flow is primarily to the west across the Southbridge Landfill site but includes an easterly component along the eastern perimeter of the landfill." It further concluded, "in the vicinity of monitoring well MW-9 an eastward flow direction is inferred indicating groundwater flow along the eastern edge of the site to wetlands located immediately east of the Landfill."
- 133. In its January 2016 Hydrogeology Investigation, Sanborn Head concluded that groundwater at the Landfill flows west/northwest and that a localized component of groundwater also flowed east toward Wetland I.
- 134. It its April 2016 Investigation, Sanborn Head stated that Wetlands A and Z "are the primary discharge zones for groundwater flowing west/northwesterly across the [Landfill] Site."
- 135. Groundwater flowing west/northwest and east through overburden at the Landfill maintains a direct hydrological connection between the Landfill and the Wetlands. Groundwater flows from the Landfill to the Wetlands and transports pollutants from the Landfill to the Wetlands.

ii. Bedrock Groundwater Flow

136. Bedrock is rock that underlies overburden.

- 137. For the purposes of this Complaint, bedrock that is at a depth of seventy-five (75) feet or less below ground surface constitutes "shallow bedrock."
- 138. For the purposes of this Complaint, bedrock that is at a depth of greater than seventy-five (75) feet below ground surface constitutes "deep bedrock."
 - 139. Shallow bedrock in the area of the Landfill is highly fractured.
- 140. Deep bedrock in the area of the Landfill is strongly foliated, meaning that it consists of repetitive, parallel rock layers.
- 141. Partings, or gaps, in the deep bedrock parallel to the foliation pattern are common and pervasive in the area of the Landfill.
- 142. These partings parallel to the foliation of the bedrock provide pathways in the bedrock through which groundwater can flow.
- 143. Partings parallel to foliation and other fractures in bedrock strike northnortheast from the Landfill, meaning that the line at which these fractures intersect with a horizontal plane is oriented in a north-northeast direction from the Landfill.
- 144. There are also conjugate fractures in the deep bedrock that strike northwest from the Landfill. Conjugate fractures are paired fractures that form at an angle to primary bedrock fractures.
- 145. The foliation and fracture patterns in the deep bedrock near the Landfill provide pathways through which groundwater flows in both north-northeastern and northwestern directions from the Landfill.

F. The Landfill's Contamination of Groundwater

146. As detailed below in Paragraphs 182 – 229, groundwater monitoring wells around the Landfill contain elevated concentrations of the following pollutants: iron;

lead; arsenic; manganese; copper; barium; 1,4-dioxane; sulfate; total dissolved solids ("TDS"); trichloroethylene; chlorobenzene; 1,1-dichloroethane; 1,1-dichloroethene; cis-1,2-dichloroethene; toluene; chloroform; benzene; and naphthalene.

- 147. These groundwater monitoring results demonstrate that the Landfill is conveying the pollutants listed above to groundwater. The Landfill cells' compacted subgrades, liners, and/or leachate collection systems do not prevent the release of these pollutants.
- 148. The Landfill cells release pollutants to groundwater in multiple locations via several different pathways including, but not limited to, porous boundaries, subgrade, and/or liners; openings and other failures in boundaries and/or liners; and leachate collection system failures.
- 149. The groundwater monitoring wells in current use at the Landfill do not adequately reflect the full extent of the Landfill's groundwater pollution, because there are not enough monitoring wells in relevant locations and at relevant depths. There is a particular lack of monitoring wells in deep bedrock.
- 150. Even though there are only three monitoring wells at the Landfill that extend into deep bedrock, one of those, the Former Irrigation Well described below in Paragraphs 216 220, has shown 1,4-dioxane to be present in concentrations more than 100 times the applicable safety threshold.
- 151. None of the samples collected from the deep bedrock monitoring wells have been tested for the presence of lead or other metals.

i. Shallow Groundwater Monitoring

- 152. Defendants' consultants submit Quarterly Groundwater and Surface Water Sampling Results ("Quarterly Sampling Reports") to DEP each calendar quarter in accordance with 310 CMR 19.132 and the September 2008 Groundwater and Surface Water Sampling Plan for the Southbridge Landfill.
- 153. The Quarterly Sampling Reports include testing data from samples collected from groundwater monitoring wells located at and around the Landfill and surface water sampling locations in Wetlands A and I. The Quarterly Sampling Reports identify each groundwater monitoring well and surface water sampling location using a unique location identification code.
- 154. Each groundwater monitoring well sampled in connection with the Quarterly Sampling Reports is located in either overburden soil or shallow bedrock.
- 155. The Quarterly Sampling Reports include, but are not limited to, testing results for the following parameters: iron; lead; arsenic; manganese; copper; barium; 1,4-dioxane; sulfate; total dissolved solids ("TDS"); trichloroethylene; chlorobenzene; 1,1-dichloroethane; 1,1-dichloroethene; cis-1,2-dichloroethene; toluene; chloroform; benzene; and naphthalene.
- 156. The Quarterly Sampling Reports compare the groundwater sample testing results, where applicable, to Massachusetts Primary and/or Secondary Maximum Contaminant Levels (respectively, "MMCLs" and "SMCLs") or to Massachusetts Office of Research and Standards Guidelines ("ORSGs"), to assess water quality.

- 157. Both Sanborn Head, in the January 2016 Hydrogeology Investigation, and Tighe & Bond, in the 2013 Water Quality Evaluation, have used applicable MMCLs, SMCLs, and ORSGs as benchmarks for what constitute "elevated" levels of pollutants.
- 158. MMCLs are defined by Massachusetts regulation as "the maximum permissible level of a contaminant in water which is delivered to any user of a public water system." 310 CMR 22.02(1).
 - 159. MMCLs are set by either EPA or DEP.
- 160. SMCLs are defined by Massachusetts regulation as "the maximum permissible level of a contaminant in water, which is delivered to the free flowing outlet of the ultimate user of a Public Water System." 310 CMR 22.02(1).
 - 161. SMCLs are set by EPA.
- 162. Massachusetts adopts MMCLs and SMCLs "to promote the public health and general welfare by preventing the pollution and securing the sanitary protection of all such waters used as sources of water supply and ensuring that public water systems in Massachusetts provide to users thereof water that is safe, fit and pure to drink." 310 CMR 22.01(1).
- 163. ORSGs are developed by the Massachusetts Office of Research and Standards, using EPA guidance, for chemicals that have not been assigned an MMCL or SMCL.
- 164. The SMCL for iron is 300 μ g/L (micrograms per liter). 310 CMR 22.07D(1).
 - 165. The MMCL for lead is 15 μ g/L. 310 CMR 22.06B(1)(c).
 - 166. The MMCL for arsenic 10 μg/L. 310 CMR 22.06(2).

- 167. The SMCL for manganese is 50 μ g/L. 310 CMR 22.07D(1).
- 168. The MMCL for copper is 1300 μg/L. 310 CMR 22.06B(1)(c).
- 169. The MMCL for barium is 2000 μg/L. 310 CMR 22.06(2).
- 170. The ORSG for 1,4-dioxane is 0.3 μg/L. 310 CMR 22.16A(27)(b).
- 171. The SMCL for sulfate is 250 mg/L. 310 CMR 22.07D(1).
- 172. The SMCL for TDS is 500 mg/L. 310 CMR 22.07D(1).
- 173. The MMCL for trichloroethylene is 5 μg/L. 310 CMR 22.07B(1).
- 174. The MMCL for chlorobenzene is 100 µg/L. 310 CMR 22.07B(1).
- 175. The ORSG for 1,1-dichloroethane is 70 μg/L. 310 CMR 22.16A(27)(b).
- 176. The MMCL for 1,1-dichloroethene is 7 μg/L. 310 CMR 22.07B(1).
- 177. The MMCL for cis-1,2-dichloroethene is 70 μg/L. 310 CMR 22.07B(1).
- 178. The MMCL for toluene is 1000 μg/L. 310 CMR 22.07B(1).
- 179. The ORSG for chloroform is 70 μg/L. 310 CMR 22.16A(27)(b).
- 180. The MMCL for benzene is 5 μ g/L. 310 CMR 22.07B(1).
- 181. The ORSG for naphthalene is 140 μg/L. 310 CMR 22.16A(27)(b).
- 182. Groundwater monitoring well MW-3A is located to the southwest of the Landfill, between the Landfill and Wetland A. MW-3A is 22.05 feet deep and extends only into overburden. The Landfill's Quarterly Sampling Reports have reported the following pollutant concentrations in MW-3A:

| ¶ No. | Sample Date | Reported Iron Conc. (µg/L) SMCL= 300 µg/L | Reported 1,4- Dioxane Conc. (µg/L) ORSG= 0.3 µg/L | Reported Lead Conc. (µg/L) MMCL= 15 µg/L | Reported Arsenic Conc. (µg/L) MMCL= 10 µg/L | Reported Manganese Conc. (µg/L) SMCL=50 µg/L | Reported Chlorobenzene Conc. (µg/L) MMCL = 100 µg/L |
|-------|----------------|---|---|--|--|--|---|
| 182a | 11/30/11 | 113000 | 3.7 | 18 | 40 | 2390 | 2 |
| 182b | 3/12/12 | 54100 | 3.3 | 11 | 22 | 2340 | 1.7 |
| 182c | 6/6/12 | 146800 | 3.4 | 23 | 39 | 8449 | 1.9 |
| 182d | 9/18/12 | 15800 | 4.1 | 3.7 | 13 | 1530 | 2.3 |
| 182e | 12/17/12 | 24200 | 3.1 | 4.1 | 15 | 1770 | ND |
| 182f | 3/18/13 | 3760 | 3 | ND ¹ | 2.3 | 3130 | 2 |
| 182g | 6/19/13 | 39600 | 3.1 | 7.6 | 38 | 2030 | 2 |
| 182h | 9/26/13 | 77800 | 3.4 | 17 | 43 | 2130 | 2.4 |
| 182i | 12/3/13 | 8830 | 3.1 | ND | 6 | 4330 | 2.3 |
| 182j | 3/27/14 | 304000 | 2.5 | 48 | 150 | 3430 | 1.8 |
| 182k | 6/27/14 | 65900 | 2.7 | 13 | 40 | 2200 | 1.8 |
| 1821 | 9/26/14 | 20100 | 2.3 | 2.7 | 14 | 1630 | 2.3 |
| 182m | 12/23/14 | 11400 | 3.2 | 22 | 50 | 3900 | 1.9 |
| 182n | 3/13/15 | 25800 | 2.8 | 6 | 14 | 8720 | 1.5 |
| 182o | 3/13/15 | 32000 | 2.4 | 9.2 | 14 | 9900 | 1.4 |
| 182p | 6/5/15 | 10000 | 2.3 | ND | 14 | 1680 | 1.6 |
| 182q | 9/24/15 | 42400 | 2.8 | 17 | 32 | 2800 | 1.4 |
| 182r | 12/15/15 | 25200 | 2 | 2.7 | 32 | 3540 | 1.5 |
| 182s | 3/8/16 | 14800 | 0.95 | 2.4 | 21 | 3340 | 0.67 |
| 182t | 6/20/16 | 29600 | 2.6 | 1.8 | 31 | 3480 | 1 |
| 182u | 9/27/16 | 19000 | 2.2 | 2 | 32 | 1940 | 1 |
| 182v | 12/28/16 | 29000 | 1.4 | ND | 43 | 3950 | 1.1 |
| 182w | 3/20/17 | 14600 | 2.2 | ND | 14 | 2990 | 0.94 |

¹ Throughout this Complaint, the use of "ND" with respect to testing results means that the report indicated that the relevant parameter was not detected above the method detection limit.

- 183. The Quarterly Sampling Reports for MW-3A have also reported the presence of benzene in one sample, and copper, barium, sulfate, and TDS in each sample collected from November 30, 2011 through March 20, 2017. Each sample collected during this timeframe exceeded the SMCL for TDS.
- 184. Groundwater monitoring well MW-5-2 is located to the east of the Landfill, between the Landfill and Wetland I. MW-5-2 is 36.34 feet deep and extends only into overburden. The Landfill's Quarterly Sampling Reports have reported the following pollutant concentrations in MW-5-2:

| ¶ No. | Sample Date | Reported Iron Conc. (µg/L) SMCL= 300 µg/L | Reported Arsenic Conc. (µg/L) MMCL= 10 µg/L | Reported Manganese Conc. (µg/L) SMCL=50 µg/L |
|-------|----------------|---|---|--|
| 184a | 11/30/11 | 1880 | 1.6 | 3640 |
| 184b | 3/12/12 | 323 | 2 | 4100 |
| 184c | 6/6/12 | 154.6 | 1.2 | 3083 |
| 184d | 9/18/12 | 1190 | 2.7 | 4540 |
| 184e | 12/17/12 | 17500 | 6.5 | 5030 |
| 184f | 3/18/13 | 1840 | ND | 4620 |
| 184g | 6/19/13 | 4030 | 3.1 | 4470 |
| 184h | 9/26/13 | ND | 1.5 | 5320 |
| 184i | 12/2/13 | 547 | 1 | 5510 |
| 184j | 3/28/14 | 2820 | 2.7 | 5380 |
| 184k | 6/27/14 | 2670 | 1.7 | 5610 |
| 1841 | 9/26/14 | 6220 | 4.3 | 5430 |
| 184m | 12/22/14 | 14300 | 4.8 | 5500 |
| 184n | 3/13/15 | 698 | 1 | 5170 |

| 184o | 6/5/15 | 2170 | 1.9 | 5660 |
|------|----------|------|-----|------|
| 184p | 9/24/15 | 100 | 1.1 | 6010 |
| 184q | 12/15/15 | 864 | 1.7 | 6250 |
| 184r | 3/8/16 | 506 | 1.5 | 5570 |
| 184s | 6/20/16 | 1220 | 1.2 | 6820 |
| 184t | 9/27/16 | 452 | 2 | 6970 |
| 184u | 12/28/16 | 660 | 1.0 | 6420 |
| 184v | 3/21/17 | 6800 | 1.6 | 7090 |

185. The Quarterly Sampling Reports for MW-5-2 have also reported the presence of lead in six samples, naphthalene in eleven samples, and copper, barium, sulfate, and TDS in each sample collected from November 30, 2011 through March 21, 2017.

186. Groundwater monitoring well MW-6A is located to the west of the Landfill, between the Landfill and Wetland A. It is 22.40 feet deep and extends only into overburden. The Landfill's Quarterly Sampling Reports have reported the following pollutant concentrations in MW-6A:

| ¶ No. | Sample Date | Reported Iron Conc. (µg/L) SMCL= 300 µg/L | Reported 1,4- Dioxane Conc. (µg/L) ORSG= | Reported Arsenic Conc. (µg/L) MMCL= 10 µg/L | Reported Manganese Conc. (µg/L) SMCL= 50 µg/L | Reported TDS Conc. (mg/L) SMCL= 500 mg/L |
|-------|----------------|---|--|--|---|--|
| 186a | 3/12/12 | 106000 | 0.3 μg/L 4.2 | 12 | 19000 | 2 |
| 186b | 6/6/12 | 143800 | 3.7 | 25 | 18980 | 1200 |
| 186c | 9/19/12 | 184000 | 4.1 | 38 | 16600 | 850 |
| 186d | 12/17/12 | 101000 | 1.5 | 6.7 | 21300 | 1100 |

² Throughout this Complaint, the use of "--" with respect to testing results means that testing was not performed for the relevant parameter or that data for that particular parameter are otherwise not available.

| 186e | 3/18/13 | 44000 | 0.37 | 6.9 | 7060 | 560 |
|------|----------|--------|-------|-----|-------|------|
| 186f | 6/19/13 | 27500 | 0.23 | 4.4 | 2910 | 490 |
| 186g | 9/26/13 | 93100 | 1.3 | 16 | 13900 | 800 |
| 186h | 12/2/13 | 53800 | 0.84 | 11 | 11000 | 610 |
| 186i | 3/27/14 | 181000 | 0.38 | 18 | 8750 | 760 |
| 186j | 6/26/14 | 169000 | 0.35 | 21 | 6750 | 800 |
| 186k | 9/25/14 | 39800 | 0.84 | 9.1 | 7160 | 690 |
| 1861 | 12/22/14 | 81000 | 0.22 | 9.2 | 11400 | 950 |
| 186m | 3/12/15 | 241000 | .19*3 | 14 | 15200 | 3400 |
| 186n | 6/4/15 | 120000 | .15* | 11 | 6540 | 800 |
| 186o | 12/14/15 | 64000 | 0.22 | 9.8 | 7750 | 720 |
| 186p | 3/7/16 | 120000 | .072* | 14 | 5270 | 630 |
| 186q | 6/21/16 | 168000 | 0.25 | 21 | 4430 | 760 |
| 186r | 12/27/16 | 148000 | .095* | 13 | 8380 | 740 |
| 186s | 3/20/17 | 155000 | ND | 9.8 | 4060 | 510 |

187. The Quarterly Sampling Reports for MW-6A have also reported the presence of barium in each sample, copper in fourteen samples, sulfate in seventeen samples, chlorobenzene in eight samples, toluene in three samples, trichloroethylene in one sample, and benzene in eleven samples collected from March 12, 2012 through March 20, 2017.

188. The Quarterly Sampling Reports for MW-6A have also reported the presence of lead in two samples collected from March 12, 2012 through March 20, 2017.

One of these samples, collected on September 19, 2012, contained 82 μg/L of lead – more than five times the MMCL for lead.

³ Throughout this Complaint, the presence of an asterisk next to testing results means that the relevant parameter was detected above the method detection limit but below the method reporting limit. Testing results with an asterisk are approximate values.

189. Groundwater monitoring well MW-7 is located to the northwest of the Landfill, near the southwest corner of Wetland Z. It is 27.74 feet deep and extends only into overburden. The Landfill's Quarterly Sampling Reports have reported the following pollutant concentrations in MW-7:

| ¶ No. | Sample Date | Reported Iron Conc. (µg/L) | Reported Arsenic Conc. (µg/L) | Reported Manganese Conc. (µg/L) |
|---------|----------------|-------------------------------------|--|--|
| DENING. | Lever C | SMCL= 300 μg/L | MMCL= 10 μg/L | SMCL= 50 µg/L |
| 189a | 11/30/11 | 3500 | 4.7 | 280 |
| 189b | 11/30/11 | 3180 | 4.1 | 231 |
| 189c | 3/12/12 | ND | 2 | 164 |
| 189d | 6/6/12 | 2645 | 2.5 | 166.3 |
| 189e | 9/18/12 | ND | ND | 33.2 |
| 189f | 12/17/12 | 720 | 1.1 | 82 |
| 189g | 12/17/12 | 382 | ND | 83 |
| 189h | 3/18/13 | ND | 1.5 | 16.7 |
| 189i | 3/18/13 | ND | 1.2 | 16.7 |
| 189j | 6/19/13 | 310 | ND | 37.7 |
| 189k | 6/19/13 | ND | ND | 27.7 |
| 1891 | 9/26/13 | 1400 | 3.1 | 110 |
| 189m | 12/2/13 | 3540 | 3.1 | 195 |
| 189n | 3/27/14 | 1180 | 2.2 | 64 |
| 189o | 6/26/14 | ND | 1.6 | ND |
| 189p | 9/25/14 | 2040 | 2.4 | 185 |
| 189q | 12/22/14 | 1590 | 1.6 | 58 |
| 189r | 3/12/15 | 2910 | 3.5 | 150 |
| 189s | 6/4/15 | 1230 | 2.7 | 110 |
| 189t | 9/23/15 | 410 | 3.3 | 116 |
| 189u | 12/14/15 | 3750 | 6.4 | 462 |

| 189v | 3/7/16 | 933 | 4.3 | 180 |
|------|----------|-------|-----|------|
| 189w | 6/21/16 | 15800 | 7.9 | 1290 |
| 189x | 9/26/16 | ND | 2 | 372 |
| 189y | 12/27/16 | 245 | 2.2 | 50.5 |
| 189z | 3/20/17 | 207 | 1.6 | 26.6 |

190. The Quarterly Sampling Reports for MW-7 have also reported the presence of lead in five samples, copper in twenty-one samples, barium in twenty-five samples, toluene in three samples, and both sulfate and TDS in each sample collected from November 30, 2011 through March 20, 2017.

191. Groundwater monitoring well MW-8 is located to the northwest of the Landfill, between the Landfill and Wetland Z. It is 47.94 feet deep, and extends only into overburden. The Landfill's Quarterly Sampling Reports have reported the following pollutant concentrations in MW-8:

| ¶ No. | Sample Date | Reported Iron Conc. (µg/L) | Reported Lead Conc. (µg/L) | Reported Arsenic Conc. (µg/L) | Reported Manganese Conc. (µg/L) |
|-------|----------------|-------------------------------------|-------------------------------------|--|--|
| | | SMCL= 300 μg/L | MMCL= 15 μg/L | MMCL= 10 μg/L | SMCL= 50 µg/L |
| 191a | 11/30/11 | 26000 | 9.5 | 12 | 967 |
| 191b | 3/12/12 | 58400 | 17 | 20 | 1240 |
| 191c | 6/6/12 | 11520 | 4.9 | 6.8 | 392.5 |
| 191d | 9/18/12 | ND | ND | 2.2 | 276 |
| 191e | 12/17/12 | 2320 | ND | 4.4 | 342 |
| 191f | 3/18/13 | 1770 | ND | 3.6 | 202 |

192. The Quarterly Sampling Reports for MW-8 have also reported the presence of copper, barium, sulfate, and TDS in each sample collected from November 30, 2011 through March 18, 2013.

193. Groundwater monitoring well MW-8SR is located to the northwest of the Landfill, between the Landfill and Wetland Z. It is 22.67 feet deep and extends only into overburden. The Landfill's Quarterly Sampling Reports have reported the following pollutant concentrations in MW-8SR:

| ¶ No. | Sample Date | Reported Iron Conc. (µg/L) SMCL= 300 µg/L | Reported 1,4- Dioxane Conc. (µg/L) ORSG= 0.3 µg/L | Reported Lead Conc. (µg/L) MMCL= 15 µg/L | Reported Manganese Conc. (µg/L) SMCL= 50 µg/L |
|-------|----------------|---|---|---|--|
| 193a | 12/3/13 | 201000 | .078* | 48 | 2230 |
| 193b | 3/27/14 | 144000 | .12* | 38 | 1530 |
| 193c | 6/26/14 | 116000 | ND | 28 | 1700 |
| 193d | 9/26/14 | ND | 0.14 | ND | 183 |
| 193e | 12/22/14 | 4170 | .17* | 1 | 57 |
| 193f | 3/12/15 | ND | ND | ND | ND |
| 193g | 6/4/15 | 3390 | ND | 2 | 238 |
| 193h | 9/23/15 | 1490 | .11* | 1.2 | 213 |
| 193i | 12/14/15 | ND | .10* | ND | ND |
| 193j | 3/7/16 | 153 | ND | ND | 15 |
| 193k | 6/20/16 | 6080 | .058* | ND | 135 |
| 1931 | 9/26/16 | 3020 | ND | 3 | 176 |
| 193m | 12/27/16 | ND | ND | ND | 41.5 |
| 193n | 3/21/17 | 8540 | ND | 1.1 | 115 |

- 194. The Quarterly Sampling Reports for MW-8SR have also reported the presence of copper in twelve samples, sulfate in eleven samples, and barium and TDS in each sample collected from December 3, 2013 through March 21, 2017.
- 195. The Quarterly Sampling Reports for MW-8SR have also reported the presence of arsenic in five samples collected from December 3, 2013 through March 21, 2017. One of these samples, collected on December 3, 2013, contained 43 μg/L of arsenic more than four times the MMCL.

196. Groundwater monitoring well MW-9 is located to the east of the Landfill, between the Landfill and Wetland I. It is 34.50 feet deep and extends only into overburden. The Landfill's Quarterly Sampling Reports have reported the following pollutant concentrations in MW-9:

| ¶ No. | Sample Date | Reported Iron Conc. (µg/L) SMCL= 300 µg/L | Reported Arsenic Conc. (µg/L) MMCL= 10 µg/L | Reported Manganese Conc. (µg/L) SMCL=50 µg/L |
|-------|----------------|---|---|--|
| 196a | 11/30/11 | 243 | 1.9 | 133 |
| 196b | 3/12/12 | 342 | 7 | 397 |
| 196c | 6/6/12 | 659.3 | 1 | 99.75 |
| 196d | 9/18/12 | 807 | 3.3 | 98.9 |
| 196e | 12/17/12 | 24400 | 28 | 473 |
| 196f | 3/18/13 | 1090 | 3.7 | 283 |
| 196g | 6/19/13 | 571 | 4.1 | 114 |
| 196h | 9/26/13 | 142 | ND | 35 |
| 196i | 12/2/13 | 9700 | 8.9 | 193 |
| 196j | 3/28/14 | 16300 | 18 | 265 |
| 196k | 6/27/14 | 2420 | 2.2 | 138 |
| 1961 | 9/26/14 | 7490 | 7 | 207 |

| 196m | 12/22/14 | 8210 | 4.7 | 147 |
|------|----------|------|------|------|
| 196n | 3/12/15 | 4210 | 6.3 | 225 |
| 1960 | 6/5/15 | 631 | 1 | 50 |
| 196p | 9/24/15 | ND | ND | 45 |
| 196q | 12/15/15 | 4510 | 2.4 | 114 |
| 196r | 3/8/16 | 1000 | 2.4 | 66.2 |
| 196s | 6/20/16 | 122 | ND | 40.6 |
| 196t | 9/27/16 | 525 | 2 | 30 |
| 196u | 12/28/16 | 1350 | 2.1 | 98.5 |
| 196v | 3/21/17 | 288 | , ND | 43 |

197. The Quarterly Sampling Reports for MW-9 have also reported the presence of lead in eight samples, copper in twenty-one samples, and barium, sulfate, and TDS in each sample collected from November 30, 2011 through March 21, 2017.

198. Groundwater monitoring well MW-10BR is located to the east of the Landfill, between the Landfill and Wetland I. It is 37.45 feet deep and extends into shallow bedrock. The Landfill's Quarterly Sampling Reports have reported the following pollutant concentrations in MW-10BR:

| ¶ No. | Sample Date | Reported Iron Conc. (µg/L) | Reported Arsenic Conc. (µg/L) | Reported Manganese Conc. (µg/L) |
|-------|----------------|-------------------------------------|--|--|
| | | SMCL= 300 μg/L | MMCL= 10 μg/L | SMCL= 50 µg/L |
| 198a | 11/30/11 | 11900 | 84 | 2960 |
| 198b | 3/12/12 | 13200 | 83 | 2850 |
| 198c | 6/6/12 | 12960 | 81 | 2565 |
| 198d | 9/18/12 | 13600 | 66 | 2660 |
| 198e | 12/17/12 | 10100 | 77 | 2890 |
| 198f | 3/18/13 | 12700 | 74 | 2770 |

| 100 | = (0 /4 0 | 4.4000 | | |
|------|-----------|--------|-----|------|
| 198g | 7/2/13 | 14800 | 55 | 2640 |
| 198h | 12/2/13 | 12200 | 72 | 3060 |
| 198i | 3/28/14 | 7370 | 75 | 3010 |
| 198j | 6/27/14 | 7140 | 74 | 2840 |
| 198k | 9/26/14 | 9980 | 71 | 2990 |
| 1981 | 12/22/14 | 14600 | 57 | 2540 |
| 198m | 3/13/15 | 9540 | 94 | 2870 |
| 198n | 6/5/15 | 8460 | 94 | 2920 |
| 1980 | 9/23/15 | 15100 | 87 | 2540 |
| 198p | 12/15/15 | 9630 | 120 | 2810 |
| 198q | 3/8/16 | 4580 | 120 | 3130 |
| 198r | 6/20/16 | 11800 | 93 | 2820 |
| 198s | 9/27/16 | 7040 | ND | 3220 |
| 198t | 12/28/16 | 3280 | 62 | 3260 |
| 198u | 3/21/17 | 9800 | 74 | 2930 |

199. The Quarterly Sampling Reports for MW-10BR have also reported the presence of 1,4-dioxane in two samples, copper in fourteen samples, barium in twenty samples, and sulfate and TDS in each sample collected from November 30, 2011 through March 21, 2017.

200. Groundwater monitoring well MW-18 is located to the west of the Landfill, between the Landfill and Wetland A. It is 69.82 feet deep and extends only into overburden. The Landfill's Quarterly Sampling Reports have reported the following pollutant concentrations in MW-18:

| ¶ No. | Sample Date | Reported Iron Conc. (µg/L) SMCL= 300 µg/L | Reported 1,4- Dioxane Conc. (µg/L) ORSG= 0.3 µg/L | Reported Manganese Conc. (µg/L) SMCL= 50 µg/L |
|-------|----------------|---|---|--|
| 200a | 3/12/12 | 18300 | 3 | 12200 |
| 200b | 6/6/12 | 984.9 | 2.7 | 14200 |
| 200c | 9/19/12 | 23300 | 3.5 | 11300 |
| 200d | 12/17/12 | 8600 | 2.4 | 9360 |
| 200e | 3/18/13 | 2430 | 2.3 | 8490 |
| 200f | 6/19/13 | 32200 | 1.7 | 7840 |
| 200g | 9/26/13 | 37000 | 1.1 | 4750 |
| 200h | 12/3/13 | 9610 | 3.1 | 9930 |
| 200i | 3/27/14 | 919 | .078* | 580 |
| 200j | 6/26/14 | 1240 | 4.5 | 15400 |
| 200k | 9/25/14 | 1970 | 6.5 | 19000 |
| 2001 | 12/22/14 | 991 | 0.2 | 1120 |
| 200m | 3/12/15 | 5540 | ND | 118 |
| 200n | 6/4/15 | ND | ND | 253 |
| 200o | 9/23/15 | 38600 | 5.5 | 13900 |
| 200p | 12/14/15 | 954 | ND | 461 |
| 200q | 3/7/16 | 25400 | ND | 897 |
| 200r | 6/21/16 | 4550 | 4.2 | 8100 |
| 200s | 9/26/16 | 12800 | 8.4 | 14800 |
| 200t | 12/27/16 | 148 | ND | 84.4 |
| 200u | 3/20/17 | 11800 | ND | 149 |

201. The Quarterly Sampling Reports for MW-18 have also reported the presence of lead in ten samples, arsenic in sixteen samples, barium in twenty samples, chlorobenzene in thirteen samples, toluene in eight samples, 1,1-dichloroethane in nine

samples, 1,1-dichloroethene in one sample, cis-1,2-dichloroethene in two samples, benzene in three samples, naphthalene in one sample, and copper, sulfate and TDS in each sample collected from March 12, 2012 through March 20, 2017. Six samples collected in this timeframe exceeded the SMCL for TDS.

202. Groundwater monitoring well MW-18BR is located to the west of the Landfill, between the Landfill and Wetland A. It is 40.12 feet deep and extends into shallow bedrock. The Landfill's Quarterly Sampling Reports have reported the following pollutant concentrations in MW-18BR:

| ¶ No. | Sample Date | Reported Iron Conc. (µg/L) SMCL= 300 µg/L | Reported 1,4- Dioxane Conc. (µg/L) ORSG= 0.3 µg/L | Reported Arsenic Conc. (µg/L) MMCL= 10 µg/L | Reported Manganese Conc. (µg/L) SMCL= 50 µg/L |
|-------|----------------|---|---|---|---|
| 202a | 3/12/12 | 8340 | ND | 13 | 620 |
| 202b | 6/6/12 | 216.3 | ND | 9 | 454.4 |
| 202c | 9/19/12 | 144 | ND | 8.6 | 390 |
| 202d | 12/17/12 | 1690 | ND | 6.2 | 234 |
| 202e | 3/18/13 | 1570 | ND | 4.8 | 102 |
| 202f | 6/19/13 | 1220 | ND | 9.7 | 612 |
| 202g | 9/26/13 | 1430 | ND | 12 | 581 |
| 202h | 12/3/13 | 9440 | .074* | 13 | 1680 |
| 202i | 3/27/14 | 1180 | .069* | 5.2 | 88 |
| 202j | 6/26/14 | 1400 | .078* | 4.9 | 448 |
| 202k | 9/25/14 | 13400 | .097* | 21 | 1160 |
| 2021 | 12/22/14 | 18100 | .11* | 16 | 772 |
| 202m | 3/12/15 | 2700 | .10* | 11 | 83 |
| 202n | 6/4/15 | 1410 | ND | 5.8 | 61 |
| 202o | 9/23/15 | ND | .12* | 11 | ND |

| 202p | 12/14/15 | 616 | .14* | 11 | 366 |
|------|----------|------|--------|------|------|
| 202q | 3/7/16 | ND | .091* | 9.7 | 21.5 |
| 202r | 6/21/16 | 8880 | .10* | 9.8 | 213 |
| 202s | 9/26/16 | 2980 | 0.084* | 18 | 622 |
| 202t | 12/27/16 | 620 | 0.097* | 11.5 | 698 |
| 202u | 3/20/17 | 400 | 0.088* | 8.7 | 283 |

203. The Quarterly Sampling Reports for MW-18BR have also reported the presence of lead in six samples, copper in twenty samples, barium in twenty samples, and sulfate and TDS in each sample collected from March 12, 2012 through March 20, 2017.

204. Groundwater monitoring well MW-20S is located to the southwest of the Landfill, between the Landfill and Wetland A. It is 15.51 feet deep and extends only into overburden. The Landfill's Quarterly Sampling Reports have reported the following pollutant concentrations in MW-20S:

| ¶ No. | Sample Date | Reported Iron Conc. (µg/L) SMCL= 300 µg/L | Reported 1,4- Dioxane Conc. (µg/L) ORSG= 0.3 µg/L | Reported Manganese Conc. (µg/L) SMCL= 50 µg/L | Reported Chlorobenzene Conc. (µg/L) MMCL = 100 µg/L |
|-------|----------------|---|---|--|---|
| 204a | 10/8/13 | 32900 | .1* | 9730 | 0.9 |
| 204b | 12/3/13 | 4300 | .16* | 11100 | 1.4 |
| 204c | 3/27/14 | 9620 | .069* | 20600 | 1.9 |
| 204d | 6/26/14 | 1930 | .19* | 26400 | 6.4 |
| 204e | 9/26/14 | 2400 | ND | 9500 | 1.6 |
| 204f | 12/23/14 | 119 | ND | 1840 | ND |
| 204g | 3/13/15 | 532 | ND | 10500 | 1 |
| 204h | 6/4/15 | 554 | ND | 5230 | 0.7 |
| 204i | 9/24/15 | 1850 | 0.21 | 8180 | 1.8 |

| 204j | 12/14/15 | 195 | 0.39 | 7340 | 1.4 |
|------|----------|------|------|-------|-----|
| 204k | 3/7/16 | 466 | .14* | 17900 | 1.2 |
| 2041 | 6/21/16 | 506 | 0.28 | 38300 | 3.8 |
| 204m | 9/27/16 | 1300 | 0.41 | 20600 | 1.7 |
| 204n | 12/27/16 | 140 | ND | 73.1 | ND |
| 204o | 3/20/17 | 571 | ND | 1440 | ND |

205. The Quarterly Sampling Reports for MW-20S have also reported the presence of lead in three samples, arsenic in seven samples, copper in fourteen samples, 1,1-dichloroethane in one sample, benzene in seven samples, naphthalene in two samples, and barium, sulfate, and TDS in each sample collected from October 8, 2013 through March 20, 2017. The concentration of TDS exceeded the SMCL in thirteen samples during this timeframe.

206. Groundwater monitoring location SO-1 is located to the west of the Landfill, between the Landfill and Wetland A. It is 17.22 feet deep and extends only into overburden. The Landfill's Quarterly Sampling Reports have reported the following pollutant concentrations in SO-1:

| ¶ No. | Sample Date | Reported Iron Conc. (µg/L) SMCL= 300 µg/L | Reported 1,4- Dioxane Conc. (µg/L) ORSG= 0.3 µg/L | Reported Lead Conc. (µg/L) MMCL= 15 µg/L | Reported Arsenic Conc. (µg/L) MMCL= 10 µg/L | Reported Manganese Conc. (µg/L) SMCL= 50 µg/L |
|-------|----------------|---|---|---|--|--|
| 206a | 11/30/11 | 73700 | 0.78 | 25 | 15 | 866 |
| 206b | 3/12/12 | 5850 | 1 | ND | 8 | 349 |
| 206c | 6/6/12 | 88640 | 0.99 | 31 | 22 | 864 |
| 206d | 9/19/12 | 151000 | 1.1 | 50 | 26 | 1300 |
| 206e | 12/17/12 | 38600 | 0.89 | 10 | 9.5 | 796 |

| 206f | 3/18/13 | 6690 | 1 | ND | 5.8 | 389 |
|------|----------|-------|------|-----|-----|------|
| 206g | 6/19/13 | 85900 | 0.95 | 26 | 21 | 1220 |
| 206h | 12/3/13 | 20200 | 1.1 | 5.6 | 7.2 | 494 |
| 206i | 3/27/14 | 65200 | 1.3 | 23 | 15 | 1140 |
| 206j | 6/26/14 | 5040 | 1.1 | ND | 3.2 | 541 |
| 206k | 9/25/14 | 6730 | 1.3 | ND | 5.8 | 381 |
| 2061 | 12/22/14 | 10800 | 1.4 | 1.5 | 5.4 | 563 |
| 206m | 3/12/15 | 25400 | 1.6 | 13 | 6.8 | 646 |
| 206n | 6/4/15 | 50400 | 1.5 | 25 | 7.9 | 1080 |
| 206o | 9/23/15 | 38300 | 1.5 | 18 | 17 | 769 |
| 206p | 12/14/15 | 33800 | 1.7 | 30 | 12 | 649 |
| 206q | 3/7/16 | 19800 | 1.7 | 14 | 9.2 | 862 |
| 206r | 6/21/16 | 6380 | 1.8 | ND | 4.8 | 481 |
| 206s | 9/26/16 | 9940 | 1.9 | 2 | 7 | 448 |
| 206t | 12/27/16 | 191 | 1.6 | ND | ND | 608 |
| 206u | 3/20/17 | 7550 | 2.0 | ND | 4.3 | 548 |

207. The Quarterly Sampling Reports for SO-1 have also reported the presence of toluene in two samples, copper in twenty samples, and barium, sulfate, and TDS in each sample collected from November 30, 2011 through March 20, 2017.

208. Groundwater monitoring location SO-2A is located to the west of the Landfill, between the Landfill and Wetland A. It is 16.43 feet deep and extends only into overburden. The Landfill's Quarterly Sampling Reports have reported the following pollutant concentrations in SO-2A:

| ¶ No. | Sample Date | Reported Iron Conc. (µg/L) SMCL= 300 µg/L | Reported 1,4- Dioxane Conc. (µg/L) ORSG= 0.3 µg/L | Reported Manganese Conc. (µg/L) SMCL=50 µg/L | Reported Chlorobenzene Conc. (µg/L) MMCL = 100 µg/L |
|-------|----------------|---|---|--|---|
| 208a | 3/12/12 | 26100 | 3.6 | 548 | 1.1 |
| 208b | 6/6/12 | 33600 | 2.7 | 491.3 | 0.9 |
| 208c | 6/6/12 | 12280 | 2.1 | 366.4 | 1.3 |
| 208d | 9/19/12 | 800 | 1.1 | 127 | ND |
| 208e | 12/17/12 | 2320 | 7 | 411 | 2.5 |
| 208f | 3/18/13 | 6350 | 3.8 | 352 | 1.2 |
| 208g | 6/9/13 | 73100 | 1.4 | 715 | 0.8 |
| 208h | 12/3/13 | 467 | 5.3 | 410 | 2.1 |
| 208i | 3/27/14 | 36600 | 4.8 | 505 | 1.4 |
| 208j | 6/26/14 | 10300 | 4.2 | 725 | 2.1 |
| 208k | 9/25/14 | 2170 | 4.5 | 585 | 2.8 |
| 2081 | 12/23/14 | ND | 2.3 | 73 | 1.4 |
| 208m | 3/12/15 | 607 | 0.31 | 124 | ND |
| 208n | 6/5/15 | 819 | 1.1 | 163 | 0.5 |
| 208o | 9/23/15 | 511 | 2.5 | 511 | 2.9 |
| 208p | 12/14/15 | ND | 2.5 | 479 | 2.6 |
| 208q | 3/7/16 | 220 | 1.8 | 162 | 0.97 |
| 208r | 6/21/16 | 1360 | 2.5 | 2190 | 2.5 |
| 208s | 9/27/16 | 243 | 2.1 | 1920 | 2.5 |
| 208t | 12/27/16 | 859 | 0.28 | 48.6 | ND |
| 208u | 3/20/17 | 2680 | 1.5 | 589 | 1.8 |

209. The Quarterly Sampling Reports for SO-2A have also reported the presence of benzene in nine samples, and copper, barium, sulfate, and TDS in each sample from

- March 12, 2012 through March 20, 2017. Three samples in this timeframe exceeded the SMCL for TDS.
- 210. The Quarterly Sampling Reports for SO-2A have also reported the presence of lead in eight samples collected from March 12, 2012 through March 20, 2017. One of these samples, collected on June 9, 2013, contained 21 µg/L of lead above the MMCL.
- 211. The Quarterly Sampling Reports for SO-2A have also reported the presence of arsenic in eight samples collected from March 12, 2012 through March 20, 2017. One of these samples, collected on June 9, 2013, contained 11 μ g/L of arsenic above the MMCL.
- 212. The Landfill's Quarterly Sampling Reports have also reported that iron, 1,4-dioxane, lead, arsenic, manganese, copper, barium, sulfate, and TDS have been detected at groundwater monitoring locations MW-6ABR, MW-8BR, MW-9B, MW-11, MW-11BR, and MW-20B in samples collected between November 30, 2011 and March 21, 2017.

ii. Deep Bedrock Groundwater Monitoring

- 213. Pursuant to the May 25, 2016, Interim Deadline Letter, Casella is required to submit Immediate Response Action ("IRA") Status Reports to DEP. These IRA Status Reports are to be submitted within sixty days of the previous IRA Status Report, or within thirty days of the receipt of quarterly private well sampling results, whichever is earlier.
- 214. The March 2017 IRA Status Report submitted to DEP by Tighe & Bond on behalf of SRDP and the Town reports testing results from samples taken from groundwater monitoring wells. These results are found in Appendix C of that report.

- 215. The testing results reported in Appendix C of the March 2017 IRA Status
 Report include results for samples collected from three deep bedrock monitoring wells
 located near the Landfill: SH-3, SH-4, and a well that is known as the "Former Irrigation
 Well."
- 216. In Appendix C of the March 2017 IRA Status Report, Tighe & Bond reported the following results for 1,4-dioxane and toluene in samples collected from the Former Irrigation Well:

| ¶ No. | Sample Date | 1,4-Dioxane Concentration (μg/L) | Toluene Concentration (μg/L) |
|-------|-------------|-------------------------------------|---------------------------------|
| | | ORSG = $0.3 \mu g/L$ | $MMCL = 1000 \mu g/L$ |
| 216a | 2/19/16 | 37 | |
| 216b | 2/19/16 | 37 | |
| 216c | 2/19/16 | 36 | |
| 216d | 2/19/16 | 29 | |
| 216e | 4/26/16 | 42 | 230 |
| 216f | 4/27/16 | 38 | 160 |
| 216g | 4/28/16 | 39 | 84 |
| 216h | 4/28/16 | 26 | 38 |
| 216i | 4/29/16 | 26 | 59 |
| 216j | 5/5/16 | 22 | 28 |

- 217. The March 2017 IRA Status Report did not report testing data for toluene for samples collected from the Former Irrigation Well on February 19, 2016.
- 218. In Appendix C of the March 2017 IRA Status Report, Tighe & Bond also reported the presence of chloroform in samples collected from the Former Irrigation Well on June 23, 2016 and June 24, 2016.

- 219. The Former Irrigation Well has a maximum depth of 934 feet below grade surface.
 - 220. At its deepest point, the Former Irrigation Well extends into deep bedrock.
- 221. In Appendix C of the March 2017 IRA Status Report, Tighe & Bond reported the following results for toluene for samples collected from groundwater monitoring well SH-3:

| ¶ No. | Sample Date | Toluene Concentration (μg/L) MMCL = 1000 μg/L |
|-------|-------------|--|
| 221a | 6/17/16 | 3 |
| 221b | 6/22/16 | 5 |
| 221c | 6/15/16 | 10 |
| 221d | 6/16/16 | 13 |
| 221e | 6/20/16 | 2 |
| 221f | 6/21/16 | 3 |

- 222. SH-3 has a maximum depth of 500 feet below grade surface.
- 223. At its deepest point, groundwater monitoring well SH-3 extends into deep bedrock.
- 224. Boring logs for SH-3 show partings parallel to foliation striking northnortheast and fractures striking north-northeast, meaning that they are oriented in a northnortheast direction from the Landfill.
- 225. In Appendix C of the March 2017 IRA Status Report, Tighe & Bond reported the following results for toluene for samples collected from groundwater monitoring well SH-4:

| ¶ No. | Sample Date | Toluene Concentration (µg/L) |
|-------|-------------|------------------------------|
| | | $MMCL = 1000 \mu g/L$ |
| 225a | 6/24/16 | 31 |
| 225b | 6/28/16 | 42 |
| 225c | 6/27/16 | 13 |
| 225d | 6/27/16 | 110 |
| 225e | 6/23/16 | 27 |
| 225e | 6/23/16 | 27 |

- 226. The March 2017 Status Report also reported that 1,4-dioxane was detected in a sample collected from SH-4 on March 18, 2016 at a concentration of 0.15 μ g/L.
 - 227. SH-4 has a maximum depth of 215 feet below grade surface.
- 228. At its deepest point, groundwater monitoring well SH-4 extends into deep bedrock.
- 229. Boring logs for SH-4 show partings parallel to foliation striking northnortheast and fractures striking north-northeast, meaning that they are oriented in a northnortheast direction from the Landfill.

iii. Defendants' Groundwater Contamination Analyses

- 230. Many of the pollutant levels reflected in the groundwater monitoring results listed in Paragraphs 152 229 are elevated above (*i.e.*, are higher than) the MMCL, SMCL, and/or ORSG for the pollutant in question. These elevated pollutant levels are the result of the Landfill's release of pollutants to groundwater.
- 231. In the 2013 Water Quality Evaluation, Tighe & Bond reviewed five years of the Landfill's groundwater monitoring data and concluded that arsenic, lead, chromium, iron, and manganese concentrations were elevated above the applicable MMCLs or

SMCLs, and that these elevated concentrations were likely or (in the case of arsenic) potentially attributable to the Landfill.

- 232. The 2013 Water Quality Evaluation states, with respect to pollutant concentrations in groundwater: "It appears that the arsenic is naturally-occurring, but dissolved concentrations may be increasing due to reduced conditions beneath the landfill, causing insoluble arsenic to become soluble. The lead and chromium appear to be attributable to landfill waste. The concentrations of iron and manganese are elevated, which is typical for solid waste facilities."
- 233. "Reduced conditions" in the 2013 Water Quality Evaluation refers to decreased oxidation in groundwater that has come into contact with Landfill waste.

 Decreased oxidation in groundwater facilitates arsenic transport.
- 234. Sanborn Head concluded in the January 2016 Hydrogeology Investigation that arsenic, manganese, iron, and lead concentrations observed in groundwater monitoring samples are likely attributable to the Landfill.
- 235. The January 2016 Hydrogeology Investigation states on page 29 that "water quality downgradient of and adjacent to the existing landfill footprint suggests reducing geochemical conditions typical of landfills, which generally favor increased mobility of certain metals (i.e., arsenic, manganese, iron)."
- 236. In its Supplemental Final Environmental Impact Report ("SFEIR"), submitted to DEP in support of the Landfill's Expansion Application, SRDP stated that the unlined cells of the Landfill may be a source of the 1,4-dioxane found in the Landfill's groundwater monitoring wells.

237. SRDP posited in the SFEIR that an intersection between the underlying groundwater table and the Landfill may be the primary factor in leachate migration that may be responsible for elevated pollutant concentrations in the Landfill's groundwater monitoring wells.

G. Adverse Effects of the Landfill's Pollutants

i. Iron

- 238. When iron is present in water at concentrations above the SMCL of 300 μ g/L, it can result in a rusty hue, a reddish-colored sediment, and a metallic taste.
- 239. At high concentrations, iron can produce a flocculated gel and solid precipitates, which can harm aquatic habitats and fish.
- 240. Iron precipitates can settle on the gills and eggs of aquatic organisms and obstruct oxygen uptake and negatively impact reproduction and mobility.
- 241. Dissolved iron can be absorbed through the gills and stomachs of aquatic organisms and can bioaccumulate to levels that interfere with cellular processes.

ii. Lead

- 242. Exposure to lead in drinking water can lead to behavior and learning problems, delays in mental development, slowed growth, hearing problems, and anemia in children.
- 243. In pregnant women, lead intake can result in reduced fetal growth and premature birth.
- 244. Adults exposed to lead in drinking water can sustain cardiovascular damage, decreased kidney function, and reproductive problems.

245. Lead is designated as a toxic pollutant under Section 307(a) of the CWA, 33 U.S.C. § 1317(a). See also 40 C.F.R. § 401.15(44).

iii. Arsenic

- 246. Chronic exposure to arsenic in drinking water can lead to increased rates of skin, bladder, lung, kidney, liver, and/or prostate cancers, as well as cardiovascular, pulmonary, immunological, neurological, and endocrine damage.
- 247. Arsenic is designated as a toxic pollutant under Section 307(a) of the CWA, 33 U.S.C. § 1317(a). See also 40 C.F.R. § 401.15(6).

iv. Manganese

- 248. High manganese concentrations in aquatic environments can cause tissue damage in fish gills through impaired gas exchange.
- 249. Exposure to high manganese concentrations can result in damage to intestinal mucosa and kidneys, as well as internal bleeding, in fish.
- 250. Acute exposure to high levels of manganese can result in lethargy, tremors, and mental disturbances in humans.
- 251. Chronic exposure to high levels of manganese can result in neurological damage.

v. Copper

- 252. Chronic exposure to elevated concentrations of copper can impair growth, reproduction, brain function, enzyme activity, blood chemistry, and metabolism in aquatic life.
- 253. Copper is accumulated in fish gills, which can lead to morphological damage, impaired gas exchange, and death.

254. Copper is designated as a toxic pollutant under Section 307(a) of the CWA, 33 U.S.C. § 1317(a). See also 40 C.F.R. § 401.15(22).

vi. Barium

- 255. High concentrations of barium can inhibit the growth of fungi, mosses, and algae.
 - 256. Chronic exposure to barium can lead to kidney damage in humans.

vii. 1,4-Dioxane

- 257. 1,4-dioxane is a likely human carcinogen. EPA has classified 1,4-dioxane as likely to be carcinogenic by all routes of exposure.
- 258. Chronic exposure to 1,4-dioxane can result in kidney and liver damage, and liver cancer, in humans.
- 259. Chronic exposure to 1,4-dioxane can lead to dermatitis, eczema, and drying and cracking of the skin.
- 260. The ORSG of 0.3 μ g/L for 1,4-dioxane is set by DEP to protect against cancer and non-cancer health effects after chronic exposure.
- 261. Acute exposure to high levels of 1,4-dioxane can cause nausea, drowsiness, headache, and irritation of the eyes, nose, and throat.
- 262. 1,4-dioxane is highly mobile in water and does not readily biodegrade in the environment. It does not volatilize rapidly in surface water and is resistant to biodegradation.

viii. Sulfate

- 263. Sulfate can be toxic to aquatic plants and animals in high concentrations.
- 264. Sulfate can disrupt the pH of water and make it more acidic.

ix. Total Dissolved Solids

- 265. TDS is a measure of all the inorganic salts, organic matter, and other materials dissolved in water.
- 266. Increases in TDS concentrations cause water to become more saline, increasing its corrosivity and negatively impacting aquatic life.

x. Trichloroethylene

- 267. Trichloroethylene ("TCE") is carcinogenic to humans by all routes of exposure.
- 268. Chronic exposure to TCE can result in liver, kidney, immune system, and central nervous system damage in humans.
- 269. Both acute and chronic exposures to TCE during pregnancy can affect a developing fetus.
- 270. TCE is designated as a toxic pollutant under Section 307(a) of the CWA, 33 U.S.C. § 1317(a). See also 40 C.F.R. § 401.15(63).

xi. Chlorobenzene

- 271. Chronic exposure to chlorobenzene can damage the central nervous system in humans, resulting in numbness, cyanosis (purplish discoloration of the skin due to low oxygen saturation), hyperesthesia (excessive physical sensitivity), and muscle spasms.
 - 272. Chronic ingestion of chlorobenzene may result in kidney and liver damage.
- 273. Chlorobenzene is designated as a toxic pollutant under Section 307(a) of the CWA, 33 U.S.C. § 1317(a). See also 40 C.F.R. § 401.15(14).

xii. 1,1-Dichloroethane

274. 1,1-dichloroethane is classified by EPA as a possible human carcinogen.

xiii. 1,1-Dichloroethene

- 275. 1,1-dichloroethene, also known as 1,1-dichloroethylene, is classified by EPA as a possible human carcinogen.
- 276. Chronic exposure to 1,1-dichloroethene may result in liver and kidney damage.
- 277. 1,1-dichloroethene is designated as a toxic pollutant under Section 307(a) of the CWA, 33 U.S.C. § 1317(a). See also 40 C.F.R. § 401.15(27).

xiv. Cis-1,2-Dichloroethene

- 278. Chronic exposure to cis-1,2-dichloroethene, also known as cis-1,2-dichloroethylene, may cause liver, circulatory, and nervous system damage in humans.
- 279. Cis-1,2-dichloroethene is designated as a toxic pollutant under Section 307(a) of the CWA, 33 U.S.C. § 1317(a). See also 40 C.F.R. § 401.15(27).

xv. Toluene

- 280. Chronic exposure to toluene can negatively impact the central nervous system in humans, resulting in drowsiness, ataxia, tremors, cerebral atrophy, nystagmus (involuntary eye movements), and impaired speech, hearing, and vision.
- 281. Acute exposure to toluene can result in fatigue, sleepiness, headaches, nausea, and cardiac arrhythmia.
- 282. Toluene is designated as a toxic pollutant under Section 307(a) of the CWA, 33 U.S.C. § 1317(a). See also 40 C.F.R. § 401.15(61).

xvi. Chloroform

283. Chronic exposure to chloroform can cause liver and kidney damage in humans.

- 284. Acute exposure to chloroform can result in fatigue, dizziness, and headaches.
- 285. The U.S. Department of Health and Human Services has determined that chloroform may reasonably be anticipated to be a carcinogen.
- 286. Chloroform is designated as a toxic pollutant under Section 307(a) of the CWA, 33 U.S.C. § 1317(a). See also 40 C.F.R. § 401.15(19).

xvii. Benzene

- 287. Chronic exposure to benzene in drinking water can result in anemia, a decrease in blood platelets, and an increased risk of cancer in humans.
- 288. Benzene is designated as a toxic pollutant under Section 307(a) of the CWA, 33 U.S.C. § 1317(a). See also 40 C.F.R. § 401.15(8).

xviii. Naphthalene

- 289. Acute exposure to naphthalene can result in anemia in humans.
- 290. The U.S. Department of Health and Human Services has concluded that naphthalene is reasonably anticipated to be a human carcinogen.
- 291. Naphthalene is designated as a toxic pollutant under Section 307(a) of the CWA, 33 U.S.C. § 1317(a). See also 40 C.F.R. § 401.15(46).

H. DEP's Involvement with the Landfill

292. DEP has not cited Defendants for, penalized Defendants for, or ordered Defendants to take any action to prevent or remedy the Landfill's discharge of pollutants to the Wetlands and McKinstry Brook through hydrologically connected groundwater.

293. DEP has not cited Defendants for, penalized Defendants for, or ordered Defendants to take any action to prevent the release of pollutants from the Landfill to drinking water aquifers in Charlton and/or Sturbridge.

i. 2012 Trend Analysis Request

294. In a letter dated September 25, 2012, in response to a citizen complaint regarding the Landfill's frequent exceedances of MMCLs for lead, chromium, and arsenic in its groundwater monitoring wells, DEP requested that SRDP commission a study examining the incidence of these metals in its wells over the prior five years, and assessing the metals' likely sources, fate, and transport.

295. Casella proceeded to contract with Tighe & Bond to perform the five-year trend analysis. The result was the aforementioned 2013 Water Quality Evaluation, of which Tighe & Bond submitted a substantially complete draft to DEP on November 1, 2012. Notwithstanding Tighe & Bond's conclusions—e.g., that the lead and chromium were attributable to Landfill waste; that the Landfill was possibly the cause of the elevated arsenic; and that the metals were likely polluting adjacent wetlands—DEP did not order Defendants to take any remedial measures, and imposed no sanction against them.

296. On January 18, 2013, having been informed by Tighe & Bond that the Landfill was likely polluting adjacent wetlands with toxic levels of metals, DEP granted the Landfill permission to expand its annual intake of municipal solid waste from 300,000 to 405,000 tons.

ii. 2016 Consent Order

297. On December 12, 2016, DEP entered into Administrative Consent Order No. ACOP-CE-16-4003 ("2016 Consent Order") with SRDP for violations of Massachusetts Solid Waste Regulations, 310 CMR 19.000 et seq., Air Pollution Control Regulations, 310 CMR 7.00 et seq., and Wetlands Protection Regulations, 310 CMR 10.00 et seq., observed by DEP personnel during inspections at the Landfill on August 13, 2014, May 19, 2015, and May 16, 2016.

298. Violations observed during the August 13, 2014 inspection and cited in the 2016 Consent Order included: (i) SRDP's failure to prevent stormwater from flowing over unstable soil and failure to prevent turbid water from bypassing a detention basin; (ii) SRDP's failure to prevent stormwater that had come into contact with waste from flowing over a containment berm and into an under-construction Landfill cell; (iii) SRDP's failure to prevent discharge of sediment laden stormwater into wetlands; and (iv) SRDP's alteration of wetlands through sediment deposits from stormwater.

299. Violations observed during the May 19, 2015 inspection and cited in the 2016 Consent Order included: (i) SRDP's failure to cease waste placement activities when waste reached the maximum height allowed by the Landfill's Authorization to Operate Permit; (ii) SRDP's failure to maintain minimum daily cover material over waste; (iii) SRDP's acceptance of restricted material; (iv) SRDP's failure to conduct a minimum number of comprehensive waste ban inspections; (v) SRDP's failure to comply with emissions limits for emergency engines/turbines; and (vi) SRDP's failure to file an Environmental Results Program Certification for Emission for an emergency engine.

- 300. Violations observed during the May 16, 2016 inspection and cited in the 2016 Consent Order included SRDP's failure to conduct operations so as to minimize blowing litter.
- 301. The 2016 Consent Order required SRDP to implement certain corrective actions and to pay a civil administrative penalty of \$91,831.70 for the violations outlined above in Paragraphs 298 300.
- 302. The 2016 Consent Order did not discuss or cite as violations the Landfill's discharge of pollutants to wetlands or to McKinstry Brook.
- 303. The 2016 Consent Order did not require Casella or SRDP to take any actions to prevent the discharge of pollutants from Landfill cells to wetlands or to McKinstry Brook.
- 304. The 2016 Consent Order did not penalize Casella or SRDP for the discharge of pollutants from Landfill cells to wetlands or to McKinstry Brook.

iii. DEP's Chapter 21E Response

305. On September 26, 2014, Casella and SRDP's triennial testing⁴ of the well water of Individual Plaintiffs Martha and Kenneth Bergstrom (75 H Foote Road) and Darrick and Sara Roe (70 H Foote Road) in Charlton revealed the presence of 1,4-dioxane at levels of .86 μ g/L and .62 μ g/L, respectively.

306. Pursuant to authority granted by the Massachusetts Oil and Hazardous Material Release Prevention and Response Act, M.G.L. c. 21E, DEP has promulgated the Massachusetts Contingency Plan ("MCP"), 310 CMR 40.000 et seq. The major purpose

⁴ As discussed *infra*, pursuant to a DEP mandate, Casella and SRDP had been testing certain residential wells within one half-mile of the Landfill's perimeter on a triennial basis.

of the MCP is to protect human health and the environment by establishing requirements and procedures for responding to releases of oil and hazardous material. The MCP establishes Groundwater Protection Standards for hazardous materials in sources of drinking water ("GW-1" standards). The GW-1 standards generally track the MMCL and ORSG standards. See 310 CMR 40.0974.

- 307. When an exceedance of a GW-1 standard is discovered, DEP must be notified within two hours, and an Immediate Response Action ("IRA") must be conducted. See 310 CMR 40.0311(6), 40.0412(1). An IRA must, at a minimum, involve an assessment of the degree of hazard posed by the hazardous substance(s) in question, taking into account the sensitivity of the site and surrounding human and environmental receptors. See 310 CMR 40.0414(1). Furthermore, an IRA is presumed to require containment or removal of the hazardous substance(s). See 310 CMR 40.0414(2).
- 308. The GW-1 standard for 1,4-dioxane, like the ORSG, is .3 μ g/L. Thus, upon detecting 1,4-dioxane at .86 μ g/L and .62 μ g/L in the Bergstrom and Roe wells in September of 2014, Casella/SRDP was required to notify DEP within two hours and conduct an IRA.
- 309. Upon detecting 1,4-dioxane at .86 μ g/L and .62 μ g/L in the Bergstrom and Roe wells in September of 2014, neither Casella/SRDP nor its consultants notified DEP within two hours.
- 310. Upon detecting 1,4-dioxane at .86 μ g/L and .62 μ g/L in the Bergstrom and Roe wells in September of 2014, Casella/SRDP did not conduct an IRA.

- 311. When DEP learned in 2014 of the Bergstrom and Roe 1,4-dioxane exceedances, it did not require that Casella/SRDP conduct an IRA, and imposed no sanction upon them for their failure to report the 2-hour condition.
- 312. In September 2015, Casella/SRDP's triennial testing again revealed exceedances of the GW-1 standard for 1,4-dioxane, including a 1.5 μ g/L detection in the well at 65 H Foote Road and a .43 μ g/L detection in the well of Individual Plaintiffs Wilfrid and Wendy Gallien (74 H Foote Road). Additionally, exceedances of the GW-1 standards for trichloroethylene and 1,1-dichloroethene were detected at 65 H Foote Road.
- 313. On October 23, 2015, Casella/SRDP notified DEP of the GW-1 exceedances revealed in the September 2015 testing. DEP gave verbal approval to Casella/SRDP to conduct an IRA involving, inter alia, immediate notification of the contaminations to the affected families and the Charlton Board of Health; immediate provision of bottled water to any families with detections of chlorinated volatile organic compounds (CVOCs) or 1,4-dioxane; and identification and sampling of all private drinking water wells within 500 feet of any detection of CVOCs or 1,4-dioxane.
- 314. As described *infra* in Paragraphs 495 685, Casella/SRDP's additional sampling revealed, and continues to reveal, widespread contamination of residential wells on H Foote Road, Eleanor Lane, and Berry Corner Road in Charlton.
- 315. While it has publicly declared its belief that the Landfill is the source of the Charlton residential well contaminations, DEP has not required Defendants to take any action under the MCP to contain or remediate the Landfill's groundwater pollution.

iv. 2017 Consent Order

- 316. DEP's ultimate response to the Landfill's contamination of the Charlton residential wells is embodied in an Administrative Consent Order (Enf. Doc. No. 00001100) executed between DEP, Casella, SRDP, the Town of Southbridge, and the Town of Charlton on or about April 26, 2017 ("2017 Consent Order"). The 2017 Consent Order provides for the construction of a municipal water line to service homes on H Foote Road, Eleanor Lane, and Berry Corner Road (the "Water Line").
- 317. Paragraph 17 of the 2017 Consent Order states that DEP, Casella, SRDP, the Town of Southbridge, and the Town of Charlton "have agreed to enter into this Consent Order because they agree that it is in their own interests, and in the public interest, to proceed promptly with the actions called for herein."
- 318. The 2017 Consent Order provides that the Town of Southbridge will construct and operate the Water Line contingent on the parties to the Consent Order successfully completing the following actions: (i) a grant of funding to the Town of Southbridge by DEP to finance 50% of the design, engineering, and construction costs, not to exceed \$5,000,000; (ii) SRDP's and/or Casella's provision of funding to the Town of Southbridge to finance 50% of the design, engineering, and construction costs, not to exceed \$5,000,000; (iii) the Southbridge Town Council's approval to borrow funds sufficient to pay the costs of the Water Line not provided by DEP and SRDP, in the event the total cost exceeds \$10,000,000; and (iv) the Town of Charlton's acquisition of property for the construction of a pump station that is necessary for the Water Line.
- 319. The 2017 Consent Order does not describe any violations of federal or state statutes or regulations by Casella, SRDP, or the Town of Southbridge.

- 320. The 2017 Consent Order does not require Casella, SRDP, or the Town of Southbridge to take any actions to prevent the release of pollutants from Landfill cells to drinking water aquifers in Charlton and/or Sturbridge.
- 321. The 2017 Consent Order does not penalize Casella, SRDP, or the Town of Southbridge for the release of pollutants from Landfill cells to drinking water aquifers in Charlton and/or Sturbridge.

I. The Landfill's Odor and Noise Pollution

- 322. A large percentage of the waste disposed of at the Landfill consists of organic material. As this material decomposes, it generates malodorous gases such as hydrogen sulfide and ammonia. To the degree not captured by the Landfill's gas collection system, these gases are released into the air.
- 323. Hydrogen sulfide has a rotten-egg odor. Human exposure to hydrogen sulfide at low levels may cause eye irritation, respiratory irritation, headaches, nausea, loss of appetite, fatigue, and dizziness. There is evidence that chronic low-level exposure to hydrogen sulfide may be associated with an increased risk of reproductive problems such as spontaneous abortion.
- 324. Ammonia has a sharp, pungent odor. Human exposure to ammonia at low levels may cause eye, skin, and respiratory irritation.
- 325. Upon being released into the air at the Landfill, gases such as hydrogen sulfide and ammonia migrate into the surrounding communities. These odors frequently befoul the air at the Individual Plaintiffs' properties. When the odors are present, particularly in the warm weather months, the Individual Plaintiffs cannot open the windows to their homes. They cannot enjoy their yards. They cannot take walks. Their

children do not play outside. They are embarrassed to have guests. Their enjoyment of their homes and their quality of life is thus severely diminished.

- 326. Casella and SRDP have at times deployed chemical deodorizing sprays, or "misters," in an effort to mask the Landfill's malodorous gas emissions. These misters themselves have a sickening odor, and serve only to further befoul the air at the Individual Plaintiffs' properties. As stated by Casella's Landfill Development Director Thomas Cue to a reporter from the Worcester Telegram in May of 2016, the misters "smell like rotten grapes."
- 327. The Landfill's waste disposal activities generate an incessant daily racket of heavy trucks and machinery crashing, banging and beeping. Particularly for the Individual Plaintiffs who live closest to the Landfill, this noise is intolerable. It is a constant irritant and distraction, robbing them of the capacity to enjoy and focus on their daily lives.
- 328. Casella and SRDP have consistently and knowingly failed to invest in available odor and noise control technologies that would prevent the Landfill's pollution.
- 329. Casella and SRDP possess adequate funds to invest in odor and noise control technologies that would prevent the Landfill's pollution. Rather than make such investments, they have opted to continue emitting nuisance odors and noise.
- 330. Casella's Landfill Development Director Thomas Cue declared to a reporter from the Worcester Telegram in May of 2016 that it would be "silly" for Casella to invest in better odor control technology unless it were permitted to augment its revenues by expanding the Landfill. Greater revenues, Cue explained to the reporter, would enable Casella to be a better neighbor.

331. According to its 2016 Annual Report, Casella's revenue in 2016 was \$565,000,000.

V. CLAIMS

COUNT 1: VIOLATIONS OF THE CLEAN WATER ACT

- 332. Paragraphs 1 38 and 79 321 are hereby re-alleged and incorporated by reference herein.
 - 333. Count 1 is brought by the Group Plaintiffs only, against all Defendants.
- 334. As set out below, the Landfill is in ongoing violation of the CWA through its discharge of pollutants including, but not limited to, 1,4-dioxane, iron, lead, arsenic, manganese, copper, barium, sulfate, and TDS through hydrologically connected groundwater, to Wetlands A, Z, and I, and to McKinstry Brook.

i. Citizen Enforcement Suits Under the Clean Water Act

- 335. The objective of the CWA "is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." 33 U.S.C. § 1251(a). The CWA directs each state to establish water quality standards for its navigable waters. Id. § 1313.
- 336. DEP has adopted the Massachusetts Surface Water Quality Standards to achieve the CWA's objectives. 314 CMR 4.01(4).
- 337. The CWA prohibits the discharge of any pollutant from a point source into navigable waters except as authorized by a NPDES permit applicable to that point source.

 33 U.S.C. §§ 1311(a), 1342.
- 338. Pollutant discharges to navigable waters through hydrologically connected groundwater fall within the CWA's discharge prohibition.

- 339. The CWA defines navigable waters as "the waters of the United States, including the territorial seas."
- 340. The CWA authorizes citizens to commence an enforcement action against any person who violates "an effluent standard or limitation" of the CWA. 33 U.S.C. § 1365(a).
- 341. A violation of an "effluent standard or limitation" includes, among other enumerated actions, (a) any discharge of a pollutant to the waters of the United States without NPDES permit authorization and (b) any contravention of a NPDES permit condition or requirement. <u>Id.</u> § 1365(f).
- 342. The CWA grants jurisdiction to United States District Courts to enforce effluent standards or limitations, to issue injunctions, to impose appropriate civil penalties for violations, and to award costs of litigation to citizen plaintiffs. 33 U.S.C. §§ 1365(a), (d).

ii. NPDES Multi-Sector General Permit

- 343. The Landfill is subject to the 2015 NPDES Multi-Sector General Permit ("MSGP"). Section 1.1.2 of the MSGP authorizes the following types of discharges: stormwater discharges associated with industrial activity that are otherwise in compliance with the MSGP; discharges that are not otherwise required to obtain NPDES permit authorizations but are mixed with discharges that are authorized under the MSGP; and stormwater discharges from facilities subject to industry sector-specific effluent limitations guidelines.
- 344. Section 1.1.3 of the MSGP provides that non-stormwater discharges requiring NPDES permit coverage that are not specifically listed in that part are not

authorized by the MSGP, and that such unauthorized discharges "must either be eliminated or covered under another NPDES permit."

- 345. Section 1.1.3.1 of the MSGP lists allowable non-stormwater discharges for all industrial sectors. Included among the allowable non-stormwater discharges is "[u]ncontaminated ground water or spring water."
- 346. Section 1.1.3 of the MSGP does not authorize the discharge of contaminated groundwater or leachate.
- 347. Section 1.1.4 of the MSGP states: "Any discharges not expressly authorized in this permit cannot become authorized or shielded from liability under Clean Water Act (CWA) section 402(k) by disclosure to EPA, state, or local authorities after issuance of this permit via any means, including the Notice of Intent (NOI) to be covered by the permit, the Stormwater Pollution Prevention Plan (SWPPP), or during an inspection."
- 348. Section 1.1.4.1 of the MSGP states: "Stormwater discharges that are mixed with non-stormwater discharges, other than those mixed with allowable non-stormwater discharges listed in Part 1.1.3 and/or those mixed with a discharge authorized by a different NPDES permit and/or a discharge that does not require NPDES authorization, are not eligible for coverage under this permit."
- 349. Part 8.L of the MSGP sets out sector-specific requirements for "Landfills, Land Application Sites, and Open Dumps."
- 350. Section 8.L.3.1 of the MSGP entitled "Prohibition of Non-Stormwater Discharges" states: "The following discharges are not authorized by this permit: leachate, . . . drained free liquids, [and] contaminated ground water."

- 351. Leachate is defined in MSGP section 8.L.4.4 as "liquid that has passed through or emerged from solid waste and contains soluble, suspended, or miscible materials removed from such waste."
- 352. The Landfill does not have a NPDES permit that authorizes the discharge of contaminated groundwater or leachate to the Wetlands or to McKinstry Brook.

iii. Reported Surface Water Monitoring Results

- 353. The Landfill's Quarterly Sampling Reports to DEP include testing data from samples collected from surface water monitoring locations in Wetland A and Wetland I.

 The Quarterly Sampling Reports identify each surface water sampling location using a unique location identification code.
- 354. Where applicable, the Quarterly Sampling Reports compare the testing results for surface water monitoring samples to Ambient Water Quality Standards ("AWQS") set by DEP.
- 355. AWQS are set by DEP under the CWA. DEP sets these standards to achieve "the restoration and maintenance of the chemical, physical, and biological integrity of the Nation's waters." 314 CMR 4.01(4) (citing the CWA's statement of objective, 33 U.S.C. § 1251(a).).
- 356. For the pollutants listed in Paragraphs 359 367 below, DEP has set the AWQS according to EPA's National Recommended Water Quality Criteria. 314 CMR 4.05(5)(e).
- 357. EPA's National Recommended Water Quality Criteria contain two types of standards: Criteria Maximum Concentrations, defined as estimates of "the highest concentration of a material in surface water to which an aquatic community can be

exposed briefly without resulting in an unacceptable effect," and Criterion Continuous Concentrations, defined as estimates of "the highest concentration of a material in surface water to which an aquatic community can be exposed indefinitely without resulting in an unacceptable effect." EPA, National Recommended Water Quality Criteria 29 (2002).

- 358. For the purposes of this Complaint, Criteria Maximum Concentrations, as adopted by DEP, are referred to as "Acute AWQS," and Criterion Continuous Concentrations, as adopted by DEP, are referred to as "Chronic AWQS."
- 359. The Chronic AWQS for iron in freshwater is 1,000 μ g/L. There is no Acute AWQS for iron in freshwater.
- 360. The Acute AWQS for lead in freshwater is 65 μ g/L. The Chronic AWQS for lead in freshwater is 2.5 μ g/L.
- 361. The Acute AWQS for arsenic in freshwater is 340 $\mu g/L$. The Chronic AWQS for arsenic in freshwater is 150 $\mu g/L$.
 - 362. There is neither an Acute AWQS nor a Chronic AWQS for manganese.
- 363. The Acute AWQS for copper is 13 μ g/L. The Chronic AWQS for copper is 9 μ g/L.
 - 364. There is neither an Acute AWQS nor a Chronic AWQS for barium.
 - 365. There is neither an Acute AWQS nor a Chronic AWQS for 1,4-dioxane.
 - 366. There is neither an Acute AWQS nor a Chronic AWQS for sulfate.
 - 367. There is neither an Acute AWQS nor a Chronic AWQS for TDS.
- 368. Surface water monitoring location S-1 is located to the northwest of the Landfill in the northern portion of Wetland A. See Exhibit 8. The Landfill's Quarterly Sampling Reports have reported the following pollutant concentrations at S-1: